

Kauai 11—*Nothocestrum peltatum*—a

This unit is critical habitat for *Nothocestrum peltatum* and is 427 ha (1,056 ac) on State land (Kokee State Park). This unit contains portions of Kumuwela Ridge and Trail. This unit provides habitat for two populations of 100 mature, reproducing individuals of the long-lived perennial *Nothocestrum peltatum* and is currently unoccupied. This unit is essential to the conservation of the taxon because it supports habitat that is important to the establishment of additional populations on Kauai in order to reach recovery goals. The habitat features contained in this unit that are essential for this species include, but are not limited to, rich soil on steep slopes in mesic or wet forest dominated by *Acacia koa* or a mixture of *Acacia koa* and *Metrosideros polymorpha*. This unit is geographically separated from the other three units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 11—*Nothocestrum peltatum*—b

This unit is critical habitat for *Nothocestrum peltatum* and is 1,465 ha (3,619 ac) on State land (Kuia NAR, Kokee, Waimea Canyon, and Na Pali Coast State Parks). This unit contains portions of Awaawapuhi, Honopu, and Nualolo Trails, Kainamanu and Kalahu Summits, and Mahanaloa Valley. This unit provides habitat for four populations of 100 mature, reproducing individuals of the long-lived perennial *Nothocestrum peltatum* and is currently occupied with 12 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important to the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, rich soil on steep slopes in mesic or wet forest dominated by *Acacia koa* or a mixture of *Acacia koa* and *Metrosideros polymorpha*. This unit is geographically separated from the other three units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 11—*Nothocestrum peltatum*—c

This unit is critical habitat for *Nothocestrum peltatum* and is 80 ha (198 ac) on State land (Kokee and Na Pali Coast State Parks). This unit

contains Kahuamaa Flat and Puu o Kila Summit. This unit provides habitat for one population of 100 mature, reproducing individuals of the long-lived perennial *Nothocestrum peltatum* and is currently occupied with five plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, rich soil on steep slopes in mesic or wet forest dominated by *Acacia koa* or a mixture of *Acacia koa* and *Metrosideros polymorpha*. This unit is geographically separated from the other three units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 12—*Nothocestrum peltatum*—d

This unit is critical habitat for *Nothocestrum peltatum* and is 161 ha (400 ac) on State land (Waimea Canyon State Park and Puu Ka Pele Forest Reserve). This unit contains Puu Lua Summit. This unit provides habitat for two populations of 100 mature, reproducing individuals of the long-lived perennial *Nothocestrum peltatum* and is currently occupied with three plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, rich soil on steep slopes in mesic or wet forest dominated by *Acacia koa* or a mixture of *Acacia koa* and *Metrosideros polymorpha*. This unit is geographically separated from the other three units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 14—*Panicum niihauense*—a

This unit is critical habitat for *Panicum niihauense* and is 118 ha (296 ac) on State (Polihale State Park and Puu Ka Pele Forest Reserve) and Federal land (Pacific Missile Range Facility). This unit contains Nohili Point. This unit provides habitat for three populations of 300 mature, reproducing individuals of the short-lived perennial *Panicum niihauense* and is currently occupied with 23 plants. This unit is

essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. It provides habitat for the easternmost range of the species. The habitat features contained in this unit that are essential for this species include, but are not limited to, sand dunes in coastal shrubland. This unit is geographically separated from the other three units designated as critical habitat for this species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe. Although we do not feel that there is enough habitat that currently exists to reach the recovery goal of 8 to 10 populations for this species, this unit is at an appropriate distance from the other unit to avoid their destruction by one naturally occurring catastrophic event.

Kauai 15—*Panicum niihauense*—b

This unit is critical habitat for *Panicum niihauense* and is 15 ha (38 ac) on federal land (Pacific Missile Range Facility). This unit contains Mana Point and Waieli Draw. This unit provides habitat for two populations of 300 mature, reproducing individuals of the short-lived perennial *Panicum niihauense* and is currently unoccupied. This unit is essential to the conservation of the taxon because it supports habitat that is important to the establishment of additional populations on Kauai in order to reach recovery goals. The habitat features contained in this unit that are essential for this species include, but are not limited to, sand dunes in coastal shrubland. This unit is geographically separated from the other three units designated as critical habitat for this species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe. Although we do not feel that there is enough habitat that currently exists to reach the recovery goal of 8 to 10 populations for this species, this unit is at an appropriate distance from the other unit to avoid their destruction by one naturally occurring catastrophic event.

Kauai 16—*Panicum niihauense*—c

This unit is critical habitat for *Panicum niihauense* and is 11 ha (28 ac) on Federal land (Pacific Missile Range Facility) along the western coastline near the radio facility. This unit provides habitat for one population of 300 mature, reproducing individuals of the short-lived perennial *Panicum niihauense* and is currently unoccupied.

This unit is essential to the conservation of the taxon because it supports habitat that is important to the establishment of additional populations on Kauai in order to reach recovery goals. It provides habitat for the easternmost range of the species. The habitat features contained in this unit that are essential for this species include, but are not limited to, sand dunes in coastal shrubland. This unit is geographically separated from the other three units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe. Although we do not feel that there is enough habitat that currently exists to reach the recovery goal of 8 to 10 populations for this species, this unit is at an appropriate distance from the other unit to avoid their destruction by one naturally occurring catastrophic event.

Kauai 17—*Panicum niihauense*—d

This unit is critical habitat for *Panicum niihauense* and is 27 ha (67 ac) on Federal and State land. This unit contains Kokole Point. This unit provides habitat for one population of 300 mature, reproducing individuals of the short-lived perennial *Panicum niihauense* and is currently unoccupied. This unit is essential to the conservation of the taxon because it supports habitat that is important to the establishment of additional populations on Kauai in order to reach recovery goals. It provides habitat for the easternmost range of the species. The habitat features contained in this unit that are essential for this species include, but are not limited to, sand dunes in coastal shrubland. This unit is geographically separated from the other three units designated as critical habitat for this species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe. Although we do not feel that there is enough habitat that currently exists to reach the recovery goal of 8 to 10 populations for this species, this unit is at an appropriate distance from the other unit to avoid their destruction by one naturally occurring catastrophic event.

Kauai 7—*Peucedanum sandwicense*—a

This unit is critical habitat for *Peucedanum sandwicense* and is 21 ha (53 ac) on private land. This unit contains Haupu Summit and Queen Victoria's Profile. This unit provides habitat for one population of 300 mature, reproducing individuals of the short-lived perennial *Peucedanum sandwicense* and is currently occupied

with one plant. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. It provides habitat for the westernmost range of the species. The habitat features contained in this unit that are essential for this species include, but are not limited to, cliff habitats in mixed shrub coastal dry cliff communities or diverse mesic forest. This unit provides for one population within this multi-island species' historical range on Kauai that is some distance away from the other critical habitat for this species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophic event.

Kauai 11—*Peucedanum sandwicense*—b

This unit is critical habitat for *Peucedanum sandwicense* and is 579 ha (1,431 ac) on State land (Kuia NAR and Na Pali Coast State Park). This unit contains portions of Kuia and Mahanaloa Valleys, and Milolii Ridge. This unit provides habitat for two populations of 300 mature, reproducing individuals of the short-lived perennial *Peucedanum sandwicense* and is currently occupied with 55 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. It provides habitat for the westernmost range of the species. The habitat features contained in this unit that are essential for this species include, but are not limited to, cliff habitats in mixed shrub coastal dry cliff communities or diverse mesic forest. This unit provides for two populations within this multi-island species' historical range on Kauai that are some distance away from the other critical habitat for this species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophic event.

Kauai 11—*Peucedanum sandwicense*—c

This unit is critical habitat for *Peucedanum sandwicense* and is 181 ha (447 ac) on State land (Hono o Na Pali NAR and Na Pali Coast State Park). This unit contains portions of Kaaalahina Ridge, and Alealau, Kanakou, Keanapuka, and Puu Ki Summits. This unit provides habitat for one population of 300 mature, reproducing individuals of the short-lived perennial

*Peucedanum sandwicense* and is currently occupied with 100 to 200 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. It provides habitat for the westernmost range of the species. The habitat features contained in this unit that are essential for this species include, but are not limited to, cliff habitats in mixed shrub coastal dry cliff communities or diverse mesic forest. This unit provides for one population within this multi-island species' historical range on Kauai that is some distance away from the other critical habitat for this species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophic event.

Kauai 10—*Phlegmariurus nutans*—a

This unit is critical habitat for *Phlegmariurus nutans* and is 621 ha (1,532 ac) on State (Lihue-Koloa Forest Reserve) and private land. This unit contains Kahili, Kalalea, Kamanu, Kapalaoa, and Kawaikini Summits. This unit provides habitat for three populations of 300 mature, reproducing individuals of the short-lived perennial *Phlegmariurus nutans* and is currently unoccupied. This unit is essential to the conservation of the taxon because it supports habitat that is important to the establishment of additional populations on Kauai in order to reach recovery goals. It provides habitat for the westernmost range of the species. The habitat features contained in this unit that are essential for this species include, but are not limited to, tree trunks on open ridges and slopes in *Metrosideros polymorpha-Dicranopteris linearis* wet forest. This unit provides for three populations within this multi-island species' historical range on Kauai that are some distance away from the other critical habitat for this species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophic event. This species has wind-blown spores with limited opportunity for germination and growth. Therefore, this species requires large intact areas of land to support a viable population.

Kauai 11—*Phyllostegia knudsenii*—a

This unit is critical habitat for *Phyllostegia knudsenii* and is 297 ha (735 ac) on State land (Alakai Wilderness Preserve). This unit contains portions of Kawaiiki and Kipalau Valleys. This unit provides habitat for three populations of 300 mature,

reproducing individuals of the short-lived perennial *Phyllostegia knudsenii* and is currently occupied with 4 to 13 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, *Metrosideros polymorpha* lowland mesic or wet forest. Although we do not feel that there is enough habitat designated to reach the recovery goal of 8 to 10 populations, this species is a very narrow endemic and probably never naturally occurred in more than a single or a few populations.

Kauai 11—*Phyllostegia waimeae*—a

This unit is critical habitat for *Phyllostegia waimeae* and is 365 ha (901 ac) on State land (Alakai Wilderness Preserve), containing portions of Kawaiiki Ridge. This unit provides habitat for one population of 300 mature, reproducing individuals of the short-lived perennial *Phyllostegia waimeae* and is currently occupied with six plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, *Acacia koa-Metrosideros polymorpha* dominated wet or mixed mesic forest with *Cheirodendron* spp. or *Dicranopteris linearis* as co-dominants. Although we do not feel that there is enough habitat designated to reach the recovery goal of 8 to 10 populations, this species is a very narrow endemic and probably never naturally occurred in more than a single or a few populations.

Kauai 4—*Phyllostegia wawrana*—a

This unit is critical habitat for *Phyllostegia wawrana* and is 351 ha (871 ac) on State (Kealia Forest Reserve) and private land. This unit contains Lelewi, Makaleha, Uluawaa, and Wekiu Summits. This unit provides habitat for two populations of 300 mature, reproducing individuals of the short-lived perennial *Phyllostegia wawrana* and is currently occupied with 25 to 35 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently

considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, *Acacia koa-Metrosideros polymorpha-Cheirodendron* mixed mesic forest. This unit is geographically separated from the other three units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 11—*Phyllostegia wawrana*—b

This unit is critical habitat for *Phyllostegia wawrana* and is 1,038 ha (2,565 ac) on State (Alakai Wilderness Preserve, Halelea Forest Reserve, Hono o Na Pali NAR, and Na Pali Coast State Park) and private land. This unit contains Hanakoa Valley, and Alealau Summit, Hono O Napali, Keanapuka, Moaalele, Pali elelele, Pohakea, Puu Ki, and Waiahuakua Summits. This unit provides habitat for three populations of 300 mature, reproducing individuals of the short-lived perennial *Phyllostegia wawrana* and is currently occupied with three plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, *Acacia koa-Metrosideros polymorpha-Cheirodendron* mixed mesic forest. This unit is geographically separated from the other three units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 11—*Phyllostegia wawrana*—c

This unit is critical habitat for *Phyllostegia wawrana* and is 108 ha (268 ac) on State land (Alakai Wilderness Preserve), containing portions of Kipalau Valley. This unit provides habitat for two populations of 300 mature, reproducing individuals of the short-lived perennial *Phyllostegia wawrana* and is currently occupied with 1 to 10 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, *Acacia koa-Metrosideros polymorpha-Cheirodendron* mixed mesic forest. This unit is geographically

separated from the other three units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 11—*Phyllostegia wawrana*—d

This unit is critical habitat for *Phyllostegia wawrana* and is 251 ha (620 ac) on State land (Kokee and Na Pali Coast State Parks). This unit contains portions of Honopu Trail, Kainamanu and Kalahu Summits, and Kalalau Lookout. This unit provides habitat for one population of 300 mature, reproducing individuals of the short-lived perennial *Phyllostegia wawrana* and is currently occupied with 5 to 6 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable.

The habitat features contained in this unit that are essential for this species include, but are not limited to, *Acacia koa-Metrosideros polymorpha-Cheirodendron* mixed mesic forest. This unit is geographically separated from the other three units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 10—*Plantago princeps*—a

This unit is critical habitat for *Plantago princeps* and is 277 ha (682 ac) on State (Halelea and Lihue-Koloa Forest Reserves) and private land. This unit contains Kuaohukini Summit. This unit provides habitat for one population of 300 mature, reproducing individuals of the short-lived perennial *Plantago princeps* and is currently occupied with 350 to 400 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population. It provides habitat for the westernmost range of the species that is unique to Kauai. The habitat features contained in this unit that are essential for this species include, but are not limited to, windswept areas near waterfalls in *Metrosideros polymorpha-Cheirodendron* montane wet forest with riparian vegetation or *Metrosideros polymorpha* lowland to montane transitional wet forest on cliffs and ridges, growing on rocky basalt outcrops. This unit provides for one population within this multi-island species' historical range on Kauai that is some distance away from the other

critical habitat for this species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophic event.

Kauai 11—*Plantago princeps*—b

This unit is critical habitat for *Plantago princeps* and is 126 ha (312 ac) on State land (Kokee and Na Pali Coast State Park), containing Kalalau Lookout. This unit provides habitat for one population of 300 mature, reproducing individuals of the short-lived perennial *Plantago princeps* and is currently occupied with 18 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. It provides habitat for the westernmost range of the species that is unique to Kauai. The habitat features contained in this unit that are essential for this species include, but are not limited to, windswept areas near waterfalls in *Metrosideros polymorpha-Cheirodendron* montane wet forest with riparian vegetation or *Metrosideros polymorpha* lowland to montane transitional wet forest on cliffs and ridges, growing on rocky basalt outcrops. This unit provides for one population within this multi-island species' historical range on Kauai that is some distance away from the other critical habitat for this species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophic event.

Kauai 11—*Plantago princeps*—c

This unit is critical habitat for *Plantago princeps* and is 244 ha (603 ac) on State land (Halelea Forest Reserve). This unit contains Kaliko and Puu Manu Summits. This unit provides habitat for one population of 300 mature, reproducing individuals of the short-lived perennial *Plantago princeps* and is currently unoccupied. This unit is essential to the conservation of the taxon because it supports habitat that is important to the establishment of additional populations on Kauai in order to reach recovery goals. It provides habitat for the westernmost range of the species that is unique to Kauai. The habitat features contained in this unit that are essential for this species include, but are not limited to, windswept areas near waterfalls in *Metrosideros polymorpha-Cheirodendron* montane wet forest with riparian vegetation or *Metrosideros polymorpha* lowland to montane transitional wet forest on cliffs and

ridges, growing on rocky basalt outcrops.

Kauai 11—*Plantago princeps*—d

This unit is critical habitat for *Plantago princeps* and is 77 ha (189 ac) on State land (Hono o Na Pali NAR and Na Pali Coast State Park). This unit contains Alealau and Puu Ki Summits, and Kaaalahina Ridge. This unit provides habitat for one population of 300 mature, reproducing individuals of the short-lived perennial *Plantago princeps* and is currently occupied with 20 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. It provides habitat for the westernmost range of the species that is unique to Kauai. The habitat features contained in this unit that are essential for this species include, but are not limited to, windswept areas near waterfalls in *Metrosideros polymorpha-Cheirodendron* montane wet forest with riparian vegetation or *Metrosideros polymorpha* lowland to montane transitional wet forest on cliffs and ridges, growing on rocky basalt outcrops. This unit provides for one population within this multi-island species' historical range on Kauai that is some distance away from the other critical habitat for this species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophic event.

Kauai 11—*Platanthera holochila*—a

This unit is critical habitat for *Platanthera holochila* and is 4,148 ha (10,251 ac) on State (Alakai Wilderness Preserve, Halelea Forest Reserve, Hono o Na Pali NAR, and Na Pali Coast State Park) and private land. This unit contains the Alakai Swamp and Trail, Halehaha and Halepaakai Streams, and Kapoki, Kilohana, Kaali, and Pihea Summits. This unit provides habitat for four populations of 300 mature, reproducing individuals of the short-lived perennial *Platanthera holochila* and is currently occupied with 24 to 34 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. It provides habitat for the westernmost range of the species. The habitat features contained in this unit that are essential for this species include, but are not limited to, montane *Metrosideros polymorpha-*

*Dicranopteris linearis* wet forest or *M. polymorpha* mixed bog. This unit provides for four populations within this multi-island species' historical range on Kauai that are some distance away from the other critical habitat for this species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophic event.

Kauai 11—*Poa mannii*—a

This unit is critical habitat for *Poa mannii* and is 1,872 ha (4,624 ac) on State land (Kuia NAR, Kokee, Na Pali Coast, and Waimea Canyon State Parks, and Puu Ka Pele Forest Reserve). This unit contains portions of Anakai, and Awaawapuhi, Honopu, and Nualolo Trails, and Haahole, Kuia, and Mahanaloa Valleys, and Milolii Ridge. This unit provides habitat for four populations of 300 mature, reproducing individuals of the short-lived perennial *Poa mannii* and is currently unoccupied. This unit is essential to the conservation of the taxon because it supports habitat that is important to the establishment of additional populations on Kauai in order to reach recovery goals. The habitat features contained in this unit that are essential for this species include, but are not limited to, cliffs or rock faces in lowland or montane mesic *Metrosideros polymorpha* or *Acacia koa-Metrosideros polymorpha* forest. This unit is geographically separated from the other three units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 11—*Poa mannii*—b

This unit is critical habitat for *Poa mannii* and is 677 ha (1,673 ac) on State land (Alakai Wilderness Preserve), containing portions of Kipalau Valley. This unit provides habitat for three populations of 300 mature, reproducing individuals of the short-lived perennial *Poa mannii* and is currently occupied with 50 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, cliffs or rock faces in lowland or montane mesic *Metrosideros polymorpha* or *Acacia koa-Metrosideros polymorpha* forest. This unit is geographically separated from the other three units designated as critical habitat for this island-endemic species, in order

to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

**Kauai 11—*Poa mannii*—c**

This unit is critical habitat for *Poa mannii* 155 ha (383 ac) on State land (Hono o Na Pali NAR and Na Pali Coast State Park). This unit contains portions of Kaaalahina Ridge, and Alealau, Kanakou, and Puu Ki Summits. This unit provides habitat for one population of 300 mature, reproducing individuals of the short-lived perennial *Poa mannii* and is currently unoccupied. This unit is essential to the conservation of the taxon because it supports habitat that is important to the establishment of additional populations on Kauai in order to reach recovery goals. The habitat features contained in this unit that are essential for this species include, but are not limited to, cliffs or rock faces in lowland or montane mesic *Metrosideros polymorpha* or *Acacia koa-Metrosideros polymorpha* forest. This unit is geographically separated from the other three units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

**Kauai 11—*Poa mannii*—d**

This unit is critical habitat for *Poa mannii* and is 307 ha (759 ac) on State land (Na Pali-Kona Forest Reserve, Kokee and Na Pali Coast State Parks). This unit contains Kalahu, Nianiau, and Puu o Kila Summits, Kalepa Ridge, and Nakeikionaiwa Pillar. This unit provides habitat for two populations of 300 mature, reproducing individuals of the short-lived perennial *Poa mannii* and is currently occupied with 205 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, cliffs or rock faces in lowland or montane mesic *Metrosideros polymorpha* or *Acacia koa-Metrosideros polymorpha* forest. This unit is geographically separated from the other three units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

**Kauai 11—*Poa sandvicensis*—a**

This unit is critical habitat for *Poa sandvicensis* and is 1,111 ha (2,746 ac) on State land (Alakai Wilderness

Preserve). This unit contains portions of Kawaiiki Ridge and Kipalau Valley. This unit provides habitat for six populations of 300 mature, reproducing individuals of the short-lived perennial *Poa sandvicensis* and is currently occupied with 1,000 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population. The habitat features contained in this unit that are essential for this species include, but are not limited to, wet, shaded, gentle to steep slopes, ridges, and rock ledges of stream banks in semi-open to closed, wet, diverse *Acacia koa-Metrosideros polymorpha* montane forest. This unit is geographically separated from the other unit designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

**Kauai 11—*Poa sandvicensis*—b**

This unit is critical habitat for *Poa sandvicensis* and is 52 ha (129 ac) on State land (Alakai Wilderness Preserve, Hono o Na Pali NAR, and Na Pali Coast State Park). This unit contains Alealau and Keanapuka Summits. This unit provides habitat for one population of 300 mature, reproducing individuals of the short-lived perennial *Poa sandvicensis* and is currently occupied with four plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, wet, shaded, gentle to steep slopes, ridges, and rock ledges of stream banks in semi-open to closed, wet, diverse *Acacia koa-Metrosideros polymorpha* montane forest. This unit is geographically separated from the other unit designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

**Kauai 11—*Poa siphonoglossa*—a**

This unit is critical habitat for *Poa siphonoglossa* and is 1,620 ha (4,008 ac) on State land (Kuia NAR, Kokee and Na Pali Coast State Parks). This unit contains portions of Kahuamaa Flat, Kaunuahaa and Milolii Ridges, Kuia and Mahanaloa Valleys, Nualolo Trail, and Kainamanu and Puu O Kila Summits. This unit provides habitat for five

populations of 300 mature, reproducing individuals of the short-lived perennial *Poa siphonoglossa* and is currently occupied with 13 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, shady banks on steep slopes in mesic *Metrosideros polymorpha-Acacia koa* forests. This unit is geographically separated from the other unit designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

**Kauai 11—*Poa siphonoglossa*—b**

This unit is critical habitat for *Poa siphonoglossa* and is 2,189 ha (5,410 ac) on State land (Alakai Wilderness Preserve). This unit contains portions of Kawaiiki Ridge and Kipalau Valley. This unit provides habitat for five populations of 300 mature, reproducing individuals of the short-lived perennial *Poa siphonoglossa* and is currently occupied with 30 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, shady banks on steep slopes in mesic *Metrosideros polymorpha-Acacia koa* forests. This unit is geographically separated from the other unit designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

**Kauai 7—*Pteralyxia kauaiensis*—a**

This unit is critical habitat for *Pteralyxia kauaiensis* and is 345 ha (854 ac) on private land. This unit contains Hokulei Peak, Haupū and Naluakeina Summits, and Queen Victoria's Profile. This unit provides habitat for one population of 100 mature, reproducing individuals of the long-lived perennial *Pteralyxia kauaiensis* and is currently occupied with 10 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population,

which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, diverse mesic or *Diospyros sandwicensis* mixed mesic forests with *Pisonia* spp. This unit is geographically separated from the other six units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 10—*Pteralyxia kauaiensis*—b

This unit is critical habitat for *Pteralyxia kauaiensis* and is 304 ha (752 ac) on State (Halelea and Lihue-Koloa Forest Reserves) and private land, containing Kuaohukini Summit. This unit provides habitat for one population of 100 mature, reproducing individuals of the long-lived perennial *Pteralyxia kauaiensis* and is currently occupied with two plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, diverse mesic or *Diospyros sandwicensis* mixed mesic forests with *Pisonia* spp. This unit is geographically separated from the other six units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 11—*Pteralyxia kauaiensis*—c

This unit is critical habitat for *Pteralyxia kauaiensis* and is 209 ha (516 ac) on State land (Hono o Na Pali NAR and Na Pali Coast State Park). This unit contains Alealau, Kanakou, and Puu Ki Summits and Kaaalahina Ridge. This unit provides habitat for one population of 100 mature, reproducing individuals of the long-lived perennial *Pteralyxia kauaiensis* and is currently occupied with 24 to 33 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, diverse mesic or *Diospyros sandwicensis* mixed mesic forests with *Pisonia* spp. This unit is geographically separated from the other six units designated as critical habitat for this

island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 11—*Pteralyxia kauaiensis*—d

This unit is critical habitat for *Pteralyxia kauaiensis* and is 57 ha (141 ac) on State land within Makaha Valley. This unit provides habitat for one population of 100 mature, reproducing individuals of the long-lived perennial *Pteralyxia kauaiensis* and is currently occupied with 300 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population. The habitat features contained in this unit that are essential for this species include, but are not limited to, diverse mesic or *Diospyros sandwicensis* mixed mesic forests with *Pisonia* spp. This unit is geographically separated from the other six units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 11—*Pteralyxia kauaiensis*—e

This unit is critical habitat for *Pteralyxia kauaiensis* and is 353 ha (873 ac) on State land (Na Pali Coast State Park) within Kalalau Valley. This unit provides habitat for one population of 100 mature, reproducing individuals of the long-lived perennial *Pteralyxia kauaiensis* and is currently occupied with 332 to 337 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population. The habitat features contained in this unit that are essential for this species include, but are not limited to, diverse mesic or *Diospyros sandwicensis* mixed mesic forests with *Pisonia* spp. This unit is geographically separated from the other six units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 11—*Pteralyxia kauaiensis*—f

This unit is critical habitat for *Pteralyxia kauaiensis* and is 588 ha (1,445 ac) on State (Alakai Wilderness Preserve and Puu Ka Pele Forest Reserve) and private land. This unit contains Hipalau, Kawaiiki, Kipalau, and Oneopaewa Valleys and portions of Kaluahulu Ridge. This unit provides habitat for two populations of 100 mature, reproducing individuals of the

long-lived perennial *Pteralyxia kauaiensis* and is currently occupied with 70 to 82 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, diverse mesic or *Diospyros sandwicensis* mixed mesic forests with *Pisonia* spp. This unit is geographically separated from the other six units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 11—*Pteralyxia kauaiensis*—g

This unit is critical habitat for *Pteralyxia kauaiensis* and is 445 ha (1,100 ac) on State land (Kuia NAR, Na Pali Coast State Park, and Puu Ka Pele Forest Reserve). This unit contains Kawaiula, Kuia, Mahanaloa, Paaiki, and Poopooiki Valleys and Milolii Ridge. This unit provides habitat for two populations of 100 mature, reproducing individuals of the long-lived perennial *Pteralyxia kauaiensis* and is currently occupied with 335 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population. The habitat features contained in this unit that are essential for this species include, but are not limited to, diverse mesic or *Diospyros sandwicensis* mixed mesic forests with *Pisonia* spp. This unit is geographically separated from the other six units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 11—*Remya kauaiensis*—a

This unit is critical habitat for *Remya kauaiensis* and is 172 ha (426 ac) on State land (Alakai Wilderness Preserve), containing portions of Kipalau Valley. This unit provides habitat for one population of 300 mature, reproducing individuals of the short-lived perennial *Remya kauaiensis* and is currently occupied with five to 10 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in

this unit that are essential for this species include, but are not limited to, steep, north- or northeast-facing slopes in *Acacia koa-Metrosideros polymorpha* lowland mesic forest. This unit is geographically separated from the other five units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 11—*Remya kauaiensis*—b

This unit is critical habitat for *Remya kauaiensis* and is 66 ha (163 ac) on State land (Na Pali Coast State Park) within Kalalau Valley. This unit provides habitat for one population of 300 mature, reproducing individuals of the short-lived perennial *Remya kauaiensis* and is currently occupied with three plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, steep, north- or northeast-facing slopes in *Acacia koa-Metrosideros polymorpha* lowland mesic forest. This unit is geographically separated from the other five units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 11—*Remya kauaiensis*—c

This unit is critical habitat for *Remya kauaiensis* and is 886 ha (2,190 ac) on State land (Kuia NAR and Kokee State Park). This unit contains portions of Awaawapuhi, Honopu, and Nualolo Trails and Kainamanu Summit. This unit provides habitat for five populations of 300 mature, reproducing individuals of the short-lived perennial *Remya kauaiensis* and is currently occupied with 73 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, steep, north- or northeast-facing slopes in *Acacia koa-Metrosideros polymorpha* lowland mesic forest. This unit is geographically separated from the other five units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from

being destroyed by one naturally occurring catastrophe.

Kauai 11—*Remya kauaiensis*—d

This unit is critical habitat for *Remya kauaiensis* and is 47 ha (115 ac) on State land, containing portions of Kaluahaulu Ridge. This unit provides habitat for one population of 300 mature, reproducing individuals of the short-lived perennial *Remya kauaiensis* and is currently occupied with 10 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, steep, north- or northeast-facing slopes in *Acacia koa-Metrosideros polymorpha* lowland mesic forest. This unit is geographically separated from the other five units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 11—*Remya kauaiensis*—e

This unit is critical habitat for *Remya kauaiensis* and is 66 ha (163 ac) on State land (Alakai Wilderness Preserve) and contains portions of Kohua Ridge and the Mohihi Wai'alai Trail. This unit provides habitat for one population of 300 mature, reproducing individuals of the short-lived perennial *Remya kauaiensis* and is currently occupied with one plant. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, steep, north- or northeast-facing slopes in *Acacia koa-Metrosideros polymorpha* lowland mesic forest. This unit is geographically separated from the other five units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 12—*Remya kauaiensis*—f

This unit is critical habitat for *Remya kauaiensis* and is 52 ha (128 ac) on State land (Waimea Canyon State Park) near Lapa Picnic Area and Lua Reservoir. This unit provides habitat for one population of 300 mature, reproducing individuals of the short-lived perennial

*Remya kauaiensis* and is currently unoccupied. This unit is essential to the conservation of the taxon because it supports habitat that is important to the establishment of additional populations on Kauai in order to reach recovery goals. The habitat features contained in this unit that are essential for this species include, but are not limited to, steep, north- or northeast-facing slopes in *Acacia koa-Metrosideros polymorpha* lowland mesic forest. This unit is geographically separated from the other five units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 11—*Remya montgomeryi*—a

This unit is critical habitat for *Remya montgomeryi* and is 69 ha (171 ac) on State land (Kuia NAR) within portions of the Kuia and Mahanaloa Valleys. This unit provides habitat for one population of 300 mature, reproducing individuals of the short-lived perennial *Remya montgomeryi* and is currently unoccupied. This unit is essential to the conservation of the taxon because it supports habitat that is important to the establishment of additional populations on Kauai in order to reach recovery goals. The habitat features contained in this unit that are essential for this species include, but are not limited to, steep, north- or northeast-facing slopes or cliffs in transitional wet or *Metrosideros polymorpha*-dominated mixed mesic forest. This unit is geographically separated from the other two units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe. Although we do not feel that there is enough habitat that currently exists to reach the recovery goal of 8 to 10 populations for this species, this unit is at an appropriate distance from the other unit to avoid their destruction by one naturally occurring catastrophic event.

Kauai 11—*Remya montgomeryi*—b

This unit is critical habitat for *Remya montgomeryi* and is 1,010 ha (2,496 ac) on State land (Alakai Wilderness Preserve and Halelea Forest Reserve), containing portions of the Alakai Swamp. This unit provides habitat for four populations of 300 mature, reproducing individuals of the short-lived perennial *Remya montgomeryi* and is currently occupied with nine plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important

for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, steep, north- or northeast-facing slopes or cliffs in transitional wet or *Metrosideros polymorpha*-dominated mixed mesic forest. This unit is geographically separated from the other two units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe. Although we do not feel that there is enough habitat that currently exists to reach the recovery goal of 8 to 10 populations for this species, this unit is at an appropriate distance from the other unit to avoid their destruction by one naturally occurring catastrophic event.

Kauai 11—*Remya montgomeryi*—c

This unit is critical habitat for *Remya montgomeryi* and is 436 ha (1,077 ac) on State land (Kokee and Na Pali Coast State Parks). This unit contains Kahuamaa Flat, and Kalahu, Pihea, and Puu o Kila Summits, and Kalalau Lookout. This unit provides habitat for two populations of 300 mature, reproducing individuals of the short-lived perennial *Remya montgomeryi* and is currently occupied with 134 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, steep, north- or northeast-facing slopes or cliffs in transitional wet or *Metrosideros polymorpha*-dominated mixed mesic forest. This unit is geographically separated from the other two units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe. Although we do not feel that there is enough habitat that currently exists to reach the recovery goal of 8 to 10 populations for this species, this unit is at an appropriate distance from the other unit to avoid their destruction by one naturally occurring catastrophic event.

Kauai 11—*Schiedea apokremnos*—a

This unit is critical habitat for *Schiedea apokremnos* and is 170 ha (421 ac) on State land (Na Pali Coast State Park), containing Nakeikionaiwi

Pillar. This unit provides habitat for two populations of 300 mature, reproducing individuals of the short-lived perennial *Schiedea apokremnos* and is currently occupied with one plant. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, crevices of near-vertical basalt coastal cliff faces in sparse dry coastal shrub vegetation. This unit is geographically separated from the other two units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 11—*Schiedea apokremnos*—b

This unit is critical habitat for *Schiedea apokremnos* and is 187 ha (463 ac) on State land (Na Pali Coast State Park), containing Kanakou Summit. This unit provides habitat for two populations of 300 mature, reproducing individuals of the short-lived perennial *Schiedea apokremnos* and is currently occupied with 100 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, crevices of near-vertical basalt coastal cliff faces in sparse dry coastal shrub vegetation. This unit is geographically separated from the other two units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 11—*Schiedea apokremnos*—c

This unit is critical habitat for *Schiedea apokremnos* and is 295 ha (730 ac) on State land (Na Pali Coast State Park and Puu Ka Pele Forest Reserve). This unit contains portions of Kawaiula, Milolii, Paaiki, and Poopooiki Valleys. This unit provides habitat for five populations of 300 mature, reproducing individuals of the short-lived perennial *Schiedea apokremnos* and is currently occupied with 100 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important

for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, crevices of near-vertical basalt coastal cliff faces in sparse dry coastal shrub vegetation. This unit is geographically separated from the other two units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 11—*Schiedea helleri*—a

This unit is critical habitat for *Schiedea helleri* and is 483 ha (1,194 ac) on State land (Alakai Wilderness Preserve), containing portions of Halehaha and Halepaakai Streams. This unit provides habitat for three populations of 300 mature, reproducing individuals of the short-lived perennial *Schiedea helleri* and is currently unoccupied. This unit is essential to the conservation of the taxon because it supports habitat that is important to the establishment of additional populations on Kauai in order to reach recovery goals. The habitat features contained in this unit that are essential for this species include, but are not limited to, ridges and steep cliffs in closed *Metrosideros polymorpha*-*Dicranopteris linearis* montane wet forest, *M. polymorpha*-*Cheirodendron* spp. montane wet forest, or *Acacia koa*-*M. polymorpha* montane mesic forest. This unit is geographically separated from the other two units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe. Although we do not feel that there is enough habitat that currently exists to reach the recovery goal of 8 to 10 populations for this species, this unit is at an appropriate distance from the other units to avoid their destruction by one naturally occurring catastrophic event.

Kauai 11—*Schiedea helleri*—b

This unit is critical habitat for *Schiedea helleri* and is 154 ha (381 ac) on State land (Alakai Wilderness Preserve) on portions of Kohua Ridge and the Mohihi-Waialae Trail. This unit provides habitat for two populations of 300 mature, reproducing individuals of the short-lived perennial *Schiedea helleri* and is currently occupied with 50 to 60 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present



population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, ridges and steep cliffs in closed *Metrosideros polymorpha-Dicranopteris linearis* montane wet forest, *M. polymorpha-Cheirodendron* spp. montane wet forest, or *Acacia koa-M. polymorpha* montane mesic forest. This unit is geographically separated from the other two units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe. Although we do not feel that there is enough habitat that currently exists to reach the recovery goal of 8 to 10 populations for this species, this unit is at an appropriate distance from the other units to avoid their destruction by one naturally occurring catastrophic event.

Kauai 11—*Schiedea helleri*—c

This unit is critical habitat for *Schiedea helleri* and is 172 ha (426 ac) on State land (Alakai Wilderness Preserve), containing portions of Kipalau Valley. This unit provides habitat for two populations of 300 mature, reproducing individuals of the short-lived perennial *Schiedea helleri* and is currently unoccupied. This unit is essential to the conservation of the taxon because it supports habitat that is important to the establishment of additional populations on Kauai in order to reach recovery goals. The habitat features contained in this unit that are essential for this species include, but are not limited to, ridges and steep cliffs in closed *Metrosideros polymorpha-Dicranopteris linearis* montane wet forest, *M. polymorpha-Cheirodendron* spp. montane wet forest, or *Acacia koa-M. polymorpha* montane mesic forest. This unit is geographically separated from the other two units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe. Although we do not feel that there is enough habitat that currently exists to reach the recovery goal of 8 to 10 populations for this species, this unit is at an appropriate distance from the other units to avoid their destruction by one naturally occurring catastrophic event.

Kauai 11—*Schiedea kauaiensis*—a

This unit is critical habitat for *Schiedea kauaiensis* and is 12 ha (29 ac) on private land, containing Pohakukane Cliffs. This unit provides habitat for one population of 300 mature, reproducing

individuals of the short-lived perennial *Schiedea kauaiensis* and is currently unoccupied. This unit is essential to the conservation of the taxon because it supports habitat that is important to the establishment of additional populations on Kauai in order to reach recovery goals. The habitat features contained in this unit that are essential for this species include, but are not limited to, steep slopes in diverse mesic to wet *Acacia koa-Metrosideros polymorpha* forest. This unit is geographically separated from the other three units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 11—*Schiedea kauaiensis*—b

This unit is critical habitat for *Schiedea kauaiensis* and is 395 ha (975 ac) on State land (Kokee and Na Pali Coast State Parks). This unit contains Kahuamaa Flat, and Kalahu, Piheha, and Puu o Kila Summits, and Kalalau Lookout. This unit provides habitat for two populations of 300 mature, reproducing individuals of the short-lived perennial *Schiedea kauaiensis* and is currently occupied with five plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, steep slopes in diverse mesic to wet *Acacia koa-Metrosideros polymorpha* forest. This unit is geographically separated from the other three units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 11—*Schiedea kauaiensis*—c

This unit is critical habitat for *Schiedea kauaiensis* and is 510 ha (1,260 ac) on State land (Kuia NAR). This unit contains portions of Kuia and Mahanaloa Valleys and Milolii Ridge. This unit provides habitat for three populations of 300 mature, reproducing individuals of the short-lived perennial *Schiedea kauaiensis* and is currently occupied with 17 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in

this unit that are essential for this species include, but are not limited to, steep slopes in diverse mesic to wet *Acacia koa-Metrosideros polymorpha* forest. This unit is geographically separated from the other three units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 11—*Schiedea kauaiensis*—d

This unit is critical habitat for *Schiedea kauaiensis* and is 11 ha (28 ac) on State land (Hono o Na Pali NAR), containing portions of Kalalau Trail. This unit provides habitat for one population of 300 mature, reproducing individuals of the short-lived perennial *Schiedea kauaiensis* and is currently unoccupied. This unit is essential to the conservation of the taxon because it supports habitat that is important to the establishment of additional populations on Kauai in order to reach recovery goals. The habitat features contained in this unit that are essential for this species include, but are not limited to, steep slopes in diverse mesic to wet *Acacia koa-Metrosideros polymorpha* forest. This unit is geographically separated from the other three units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 11—*Schiedea membranacea*—a

This unit is critical habitat for *Schiedea membranacea* and is 251 ha (620 ac) on State land (Alakai Wilderness Preserve) within the Koaie Canyon. This unit provides habitat for two populations of 300 mature, reproducing individuals of the short-lived perennial *Schiedea membranacea* and is currently occupied with 6 to 10 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, cliffs or cliff bases of mesic or wet habitats, in lowland or montane shrubland, or forest communities dominated by *Acacia koa*, *Pipturus* spp. and *Metrosideros polymorpha* or Urticaceae shrubland on talus slopes. This unit is geographically separated from the other three units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from

being destroyed by one naturally occurring catastrophe.

Kauai 11—*Schiedea membranacea*—b

This unit is critical habitat for *Schiedea membranacea* and is 234 ha (580 ac) on State land (Kokee and Na Pali Coast State Parks). This unit contains Kalahu and Puu o Kila Summits and Kalalu Lookout. This unit provides habitat for one population of 300 mature, reproducing individuals of the short-lived perennial *Schiedea membranacea* and is currently occupied with 24 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, cliffs or cliff bases of mesic or wet habitats, in lowland or montane shrubland, or forest communities dominated by *Acacia koa*, *Pipturus* spp. and *Metrosideros polymorpha* or Urticaceae shrubland on talus slopes. This unit is geographically separated from the other three units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 11—*Schiedea membranacea*—c

This unit is critical habitat for *Schiedea membranacea* and is 528 ha (1,303 ac) on State land (Kuia NAR and Puu Ka Pele Forest Reserve). This unit contains portions of Kuia and Mahanaloa Valleys and Milolii Ridge. This unit provides habitat for three populations of 300 mature, reproducing individuals of the short-lived perennial *Schiedea membranacea* and is currently occupied with 266 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, cliffs or cliff bases of mesic or wet habitats, in lowland or montane shrubland, or forest communities dominated by *Acacia koa*, *Pipturus* spp. and *Metrosideros polymorpha* or Urticaceae shrubland on talus slopes. This unit is geographically separated from the other three units designated as critical habitat for this island-endemic species, in order to avoid all recovery

populations from being destroyed by one naturally occurring catastrophe.

Kauai 11—*Schiedea membranacea*—d

This unit is critical habitat for *Schiedea membranacea* and is 327 ha (810 ac) on State land (Kuia NAR and Kokee State Park). This unit contains portions of Awaawapuhi and Honopu Trails and Kainamau Summit. This unit provides habitat for one population of 300 mature, reproducing individuals of the short-lived perennial *Schiedea membranacea* and is currently occupied with eight plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, cliffs or cliff bases of mesic or wet habitats, in lowland or montane shrubland, or forest communities dominated by *Acacia koa*, *Pipturus* spp. and *Metrosideros polymorpha* or Urticaceae shrubland on talus slopes. This unit is geographically separated from the other three units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe.

Kauai 7—*Schiedea nuttallii*—a

This unit is critical habitat for *Schiedea nuttallii* and is 282 ha (698 ac) on private land. This unit contains Haupu and Naluakeina Summits and Queen Victoria's Profile. This unit provides habitat for two populations of 100 mature, reproducing individuals of the long-lived perennial *Schiedea nuttallii* and is currently occupied with ten to 50 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. It provides habitat for the westernmost range of the species that is unique to Kauai. The habitat features contained in this unit that are essential for this species include, but are not limited to, cliffs in lowland diverse mesic forest dominated by *Metrosideros polymorpha*. This unit provides for two populations within this multi-island species' historical range on Kauai that are some distance away from the other critical habitat for this species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophic event.

Kauai 9—*Schiedea spergulina* var. *leiopoda*—a

This unit is critical habitat for *Schiedea spergulina* var. *leiopoda* and is 5 ha (11 ac) on private land within Lawai Valley. This unit provides habitat for one population of 300 mature, reproducing individuals of the short-lived perennial *Schiedea spergulina* var. *leiopoda* and is currently occupied with 135 to 150 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, bare rock outcrops or sparsely vegetated portions of rocky cliff faces or cliff bases in diverse lowland dry to mesic forests. Although we do not feel that there is enough habitat designated to reach the recovery goal of 8 to 10 populations, this species is a very narrow endemic and probably never naturally occurred in more than a single or a few populations.

Kauai 11—*Schiedea spergulina* var. *spergulina*—a

This unit is critical habitat for *Schiedea spergulina* var. *spergulina* and is 131 ha (324 ac) on State land (Na Pali Coast State Park) within Kalalau Valley. This unit provides habitat for two populations of 300 mature, reproducing individuals of the short-lived perennial *Schiedea spergulina* var. *spergulina* and is currently occupied with one plant. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, bare rock outcrops or sparsely vegetated portions of rocky cliff faces or cliff bases in diverse lowland dry to mesic forests. This unit is geographically separated from the other two units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe. Although we do not feel that there is enough habitat that currently exists to reach the recovery goal of 8 to 10 populations for this species, this unit is of an appropriate distance from the other units to avoid their destruction by one naturally occurring catastrophic event.

Kauai 11—*Schiedea spergulina* var. *spergulina*—b

This unit is critical habitat for *Schiedea spergulina* var. *spergulina* and is 77 ha (191 ac) on State land within Kawaiiki Valley. This unit provides habitat for two populations of 300 mature, reproducing individuals of the short-lived perennial *Schiedea spergulina* var. *spergulina* and is currently occupied with five plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, bare rock outcrops or sparsely vegetated portions of rocky cliff faces or cliff bases in diverse lowland dry to mesic forests. This unit is geographically separated from the other two units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe. Although we do not feel that there is enough habitat that currently exists to reach the recovery goal of 8 to 10 populations for this species, this unit is at an appropriate distance from the other units to avoid their destruction by one naturally occurring catastrophic event.

Kauai 13—*Schiedea spergulina* var. *spergulina*—c

This unit is critical habitat for *Schiedea spergulina* var. *spergulina* and is 221 ha (545 ac) on State land within Waimea Canyon. This unit provides habitat for two populations of 300 mature, reproducing individuals of the short-lived perennial *Schiedea spergulina* var. *spergulina* and is currently unoccupied. This unit is essential to the conservation of the taxon because it supports habitat that is important to the establishment of additional populations on Kauai in order to reach recovery goals. The habitat features contained in this unit that are essential for this species include, but are not limited to, bare rock outcrops or sparsely vegetated portions of rocky cliff faces or cliff bases in diverse lowland dry to mesic forests. This unit is geographically separated from the other two units designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe. Although we do not feel that there is enough habitat that currently exists to

reach the recovery goal of 8 to 10 populations for this species, this unit is at an appropriate distance from the other unit to avoid their destruction by one naturally occurring catastrophic event.

Kauai 11—*Schiedea stellarioides*—a

This unit is critical habitat for *Schiedea stellarioides* and is 1,259 ha (3,113 ac) on State land (Alakai Wilderness Preserve and Puu Ka Pele Forest Reserve). This unit contains portions of Kaluahaulu and Kawaiiki Ridges, and Kawaiiki and Kipalau Valleys. This unit provides habitat for five populations of 300 mature, reproducing individuals of the short-lived perennial *Schiedea stellarioides* and is currently occupied with 200 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, steep slopes in closed *Acacia koa*-*Metrosideros polymorpha* lowland or montane mesic forest or shrubland. This unit is geographically separated from the other unit designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe. Although we do not feel that there is enough habitat that currently exists to reach the recovery goal of 8 to 10 populations for this species, this unit is at an appropriate size and distance from the other unit to avoid their destruction by one naturally occurring catastrophic event.

Kauai 11—*Schiedea stellarioides*—b

This unit is critical habitat for *Schiedea stellarioides* and is 129 ha (320 ac) on State land (Alakai Wilderness Preserve) within upper Waialae Valley. This unit provides habitat for one population of 300 mature, reproducing individuals of the short-lived perennial *Schiedea stellarioides* and is currently unoccupied. This unit is essential to the conservation of the taxon because it supports habitat that is important to the establishment of additional populations on Kauai in order to reach recovery goals. The habitat features contained in this unit that are essential for this species include, but are not limited to, steep slopes in closed *Acacia koa*-*Metrosideros polymorpha* lowland or montane mesic forest or shrubland. This unit is geographically separated from

the other unit designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe. Although we do not feel that there is enough habitat that currently exists to reach the recovery goal of 8 to 10 populations for this species, this unit is at an appropriate distance from the other unit to avoid their destruction by one naturally occurring catastrophic event.

Kauai 8—*Sesbania tomentosa*—a

This unit is critical habitat for *Sesbania tomentosa* and is 46 ha (115 ac) on private land, containing Pao Point and Naake Cape. This unit provides habitat for one population of 300 mature, reproducing individuals of the short-lived perennial *Sesbania tomentosa* and is currently unoccupied. This unit is essential to the conservation of the taxon because it supports habitat that is important to the establishment of additional populations on Kauai in order to reach recovery goals. It provides habitat for the westernmost range of the species. The habitat features contained in this unit that are essential for this species include, but are not limited to, sandy beaches, dunes, or pond margins in coastal dry shrublands or mixed coastal dry cliffs. This unit provides for one population within this multi-island species' historical range on Kauai that is some distance away from the other critical habitat for this species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophic event.

Kauai 14—*Sesbania tomentosa*—b

This unit is critical habitat for *Sesbania tomentosa* and is 44 ha (109 ac) on State land (Polihale State Park). This unit provides habitat for one population of 300 mature, reproducing individuals of the short-lived perennial *Sesbania tomentosa* and is currently occupied with 11 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. It provides habitat for the westernmost range of the species. The habitat features contained in this unit that are essential for this species include, but are not limited to, sandy beaches, dunes, or pond margins in coastal dry shrublands or mixed coastal dry cliffs. This unit provides for one population within this multi-island species' historical range on Kauai that is

some distance away from the other critical habitat for this species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophic event.

Kauai 11—*Solanum sandwicense*—a

This unit is critical habitat for *Solanum sandwicense* and is 2,442 ha (6,039 ac) on State land (Kuia NAR, Kokee and Na Pali Coast State Parks). This unit contains portions of the Awaawapuhi, Berry Flat, Nualolo and Honopu Trails, Kahuamaa Flat, Kainamanu and Kalahu Summits, and Kaunuohua and Kumuwela Ridges. This unit provides habitat for five populations of 300 mature, reproducing individuals of the short-lived perennial *Solanum sandwicense* and is currently occupied with eight to nine plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. It provides habitat for the westernmost range of the species that is unique to Kauai. The habitat features contained in this unit that are essential for this species include, but are not limited to, forest canopies in diverse lowland or montane *Acacia koa* or *Acacia koa-Metrosideros polymorpha* mesic or wet forests. This unit provides for five populations within this multi-island species' historical range on Kauai that are some distance away from the other critical habitat for this species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophic event.

Kauai 11—*Solanum sandwicense*—b

This unit is critical habitat for *Solanum sandwicense* and is 249 ha (614 ac) on State land, containing portions of Kawaiiki Ridge. This unit provides habitat for one population of 300 mature, reproducing individuals of the short-lived perennial *Solanum sandwicense* and is currently unoccupied. This unit is essential to the conservation of the taxon because it supports habitat that is important to the establishment of additional populations on Kauai in order to reach recovery goals. It provides habitat for the westernmost range of the species that is unique to Kauai. The habitat features contained in this unit that are essential for this species include, but are not limited to, forest canopies in diverse lowland or montane *Acacia koa* or *Acacia koa-Metrosideros polymorpha* mesic or wet forests. This unit provides for one population within this multi-island species' historical range on Kauai

that is some distance away from the other critical habitat for this species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophic event.

Kauai 11—*Spermolepis hawaiiensis*—a

This unit is critical habitat for *Spermolepis hawaiiensis* and is 95 ha (237 ac) on State land (Puu Ka Pele Forest Reserve), containing portions of Kawaiiki Valley. This unit provides habitat for one population of 500 mature, reproducing individuals of the annual *Spermolepis hawaiiensis* and is currently occupied with two plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. It provides habitat for the westernmost range of the species that is unique to Kauai. The habitat features contained in this unit that are essential for this species include, but are not limited to, *Metrosideros polymorpha* forests or *Dodonaea viscosa* lowland dry shrubland. This unit provides for one population within this multi-island species' historical range on Kauai that is some distance away from the other critical habitat for this species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophic event.

Kauai 13—*Spermolepis hawaiiensis*—b

This unit is critical habitat for *Spermolepis hawaiiensis* and is 87 ha (215 ac) on State land, containing portions of Waimea Canyon. This unit provides habitat for one population of 500 mature, reproducing individuals of the annual *Spermolepis hawaiiensis* and is currently occupied with three plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. It provides habitat for the westernmost range of the species that is unique to Kauai. The habitat features contained in this unit that are essential for this species include, but are not limited to, *Metrosideros polymorpha* forests or *Dodonaea viscosa* lowland dry shrubland. This unit provides for one population within this multi-island species' historical range on Kauai that is some distance away from the other critical habitat for this species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophic event.

Kauai 11—*Stenogyne campanulata*—a

This unit is critical habitat for *Stenogyne campanulata* and is 424 ha (1,050 ac) on State land (Kokee and Na Pali Coast State Parks). This unit contains the Kahuamaa Flats. This unit provides habitat for three populations of 300 mature, reproducing individuals of the short-lived perennial *Stenogyne campanulata* and is currently occupied with 51 to 66 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, rock faces of nearly vertical, north-facing cliffs in diverse lowland or montane mesic forest. Although we do not feel that there is enough habitat that currently exists to reach the recovery goal of 8 to 10 populations for this species, this unit is at an appropriate size to avoid their destruction by one naturally occurring catastrophic event.

Kauai 10—*Viola helenae*—a

This unit is critical habitat for *Viola helenae* and is 610 ha (1,510 ac) on State (Lihue-Koloa Forest Reserve) and private land. This unit contains portions of Kanaele Swamp and Kahili Summit. This unit provides habitat for five populations of 250 mature, reproducing individuals of the short-lived perennial *Viola helenae* and is currently occupied with 137 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, stream drainage banks or adjacent valley bottoms in light to moderate shade in *Metrosideros polymorpha-Dicranopteris linearis* lowland wet forest or *Metrosideros polymorpha-Cheirodendron* wet forest. This unit is at an appropriate size to avoid the destruction of all recovery populations by one naturally occurring catastrophic event.

Kauai 10—*Viola kauaiensis* var. *wahiawaensis*—a

This unit is critical habitat for *Viola kauaiensis* var. *wahiawaensis* and is 657 ha (1,623 ac) on State (Lihue-Koloa Forest Reserve) and private land. This unit contains portions of Kanaele Swamp and Kahili Summit. This unit

provides habitat for five populations of 300 mature, reproducing individuals of the short-lived perennial *Viola kauaiensis* var. *wahiawaensis* and is currently occupied with 13 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, *Machaerina angustifolia-Rhynchospora rugosa* lowland bog or mixed wet shrubland and adjacent *Metrosideros polymorpha* wet forest. Although we do not feel that there is enough habitat that currently exists to reach the recovery goal of 8 to 10 populations for this species, this unit is at an appropriate size to avoid their destruction by one naturally occurring catastrophic event.

**Kauai 11—*Wilkesia hobdyi*—a**

This unit is critical habitat for *Wilkesia hobdyi* and is 775 ha (1,916 ac) on State land (Hono o Na Pali NAR, Na Pali Coast State Park, and Puu Ka Pele Forest Reserve). This unit contains Anaki, and Kawaiula, Kaaholi, Paaiki, Pohakuao, and Poopooiki Valleys, Kanakou Summit, Manono Ridge, and Nakeikionaiwi Pillar. This unit provides habitat for nine populations of 300 mature, reproducing individuals of the short-lived perennial *Wilkesia hobdyi* and is currently occupied with 81 plants. This unit is important to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, coastal dry cliffs or very dry ridges. The 325–390 other plants on Kauai are not included in critical habitat because the habitat they occupy is not considered essential to the conservation of this species. The more appropriate habitat on Kauai, within its historical range, are being designated as critical habitat.

**Kauai 11—*Xylosma crenatum*—a**

This unit is critical habitat for *Xylosma crenatum* and is 840 ha (2,077 ac) on State land (Kokee and Na Pali Coast State Parks). This unit contains portions of the Awaawapuhi, Honopu, and Nualolo Trails, and Kainamanu and Kalahu Summits. This unit provides habitat for four populations of 100 mature, reproducing individuals of the long-lived perennial *Xylosma crenatum*

and is currently occupied with 14 plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, diverse *Acacia koa-Metrosideros polymorpha* montane mesic or wet forest, or *Metrosideros polymorpha-Dicranopteris linearis* montane wet forest. This unit is geographically separated from the other unit designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe. Although we do not feel that there is enough habitat that currently exists to reach the recovery goal of 8 to 10 populations for this species, this unit is at an appropriate size and distance from the other unit to avoid their destruction by one naturally occurring catastrophic event.

**Kauai 12—*Xylosma crenatum*—b**

This unit is critical habitat for *Xylosma crenatum* and is 52 ha (128 ac) on State land (Kuia NAR and Waimea Canyon State Park) near Lapa Picnic Area and Lua Reservoir. This unit provides habitat for one population of 100 mature, reproducing individuals of the long-lived perennial *Xylosma crenatum* and is currently unoccupied. This unit is essential to the conservation of the taxon because it supports habitat that is important to the establishment of additional populations on Kauai in order to reach recovery goals. The habitat features contained in this unit that are essential for this species include, but are not limited to, diverse *Acacia koa-Metrosideros polymorpha* montane mesic or wet forest, or *Metrosideros polymorpha-Dicranopteris linearis* montane wet forest. This unit is geographically separated from the other unit designated as critical habitat for this island-endemic species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophe. Although we do not feel that there is enough habitat that currently exists to reach the recovery goal of 8 to 10 populations for this species, this unit is at an appropriate distance from the other unit to avoid their destruction by one naturally occurring catastrophic event.

**Kauai 11—*Zanthoxylum hawaiiense*—a**

This unit is critical habitat for *Zanthoxylum hawaiiense* and is 523 ha (1,292 ac) on State land (Alakai

Wilderness Preserve and Puu Ka Pele Forest Reserve), containing portions of Kawaiiki Valley. This unit provides habitat for two populations of 100 mature, reproducing individuals of the long-lived perennial *Zanthoxylum hawaiiense* and is currently occupied with three plants. This unit is essential to the conservation of the taxon because it supports an extant colony of this species and includes habitat that is important for the expansion of the present population, which is currently considered non-viable. The habitat features contained in this unit that are essential for this species include, but are not limited to, lowland dry or mesic forests dominated by *Metrosideros polymorpha* or *Diospyros sandwicensis*. This unit provides for two populations within this multi-island species' historical range on Kauai that are some distance away from the other critical habitat for this species, in order to avoid all recovery populations from being destroyed by one naturally occurring catastrophic event.

**Effects of Critical Habitat Designation**

*Section 7 Consultation*

Section 7(a)(2) of the Act requires Federal agencies, including the Service, to ensure that actions they fund, authorize, or carry out are not likely to destroy or adversely modify critical habitat. Destruction or adverse modification of critical habitat occurs when a Federal action directly or indirectly alters critical habitat to the extent that it appreciably diminishes the value of critical habitat for the conservation of the species. Individuals, organizations, States, local governments, and other non-Federal entities are affected by the designation of critical habitat when their actions occur on Federal lands; require a Federal permit, license, or other authorization; or involve Federal funding.

Section 7(a) of the Act requires Federal agencies, including the Service, to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is designated or proposed. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) of the Act requires Federal agencies (action agency) to confer with us on any action that is likely to jeopardize the continued existence of a species proposed for listing or result in the destruction or adverse modification of proposed critical habitat.

TABLE 4.—APPROXIMATE CRITICAL HABITAT AREA DESIGNATED BY UNIT AND LANDOWNERSHIP OR JURISDICTION, KAUAI COUNTY, HAWAII

Unit name	State/local	Private	Federal	Total
Kauai 1— <i>Ischaemum byrone</i> —a		<1 ha (1 ac)		<1 ha (1 ac)
Kauai 2— <i>Ischaemum byrone</i> —b		5 ha (13 ac)		5 ha (13 ac)
Kauai 3— <i>Ischaemum byrone</i> —c		6 ha (15 ac)		6 ha (15 ac)
Kauai 4— <i>Adenophorus periens</i> —a	237 ha (585 ac)	<1 ha (<1 ac)		237 ha (585 ac)
Kauai 4— <i>Cyanea asarifolia</i> —a	607 ha (1,499 ac)	47 ha (117 ac)		654 ha (1,616 ac)
Kauai 4— <i>Cyanea recta</i> —a	252 ha (622 ac)	<1 ha (<1 ac)		252 ha (622 ac)
Kauai 4— <i>Cyanea recta</i> —b	79 ha (195 ac)	274 ha (678 ac)		353 ha (873 ac)
Kauai 4— <i>Cyanea remyi</i> —a	80 ha (198 ac)	295 ha (730 ac)		376 ha (928 ac)
Kauai 4— <i>Cyrtandra cyaneoides</i> —a	80 ha (198 ac)	295 ha (730 ac)		376 ha (928 ac)
Kauai 4— <i>Cyrtandra limahuliensis</i> —a	498 ha (1,231 ac)	2 ha (6 ac)		501 ha (1,237 ac)
Kauai 4— <i>Cyrtandra limahuliensis</i> —b	79 ha (195 ac)	274 ha (678 ac)		353 ha (873 ac)
Kauai 4— <i>Hibiscus clayi</i> —a		4 ha (9 ac)		4 ha (9 ac)
Kauai 4— <i>Hibiscus clayi</i> —b		85 ha (210 ac)		85 ha (210 ac)
Kauai 4— <i>Hibiscus clayi</i> —c	586 ha (1,448 ac)	2 ha (6 ac)		588 ha (1,454 ac)
Kauai 4— <i>Hibiscus clayi</i> —d		48 ha (119 ac)		48 ha (119 ac)
Kauai 4— <i>Hibiscus clayi</i> —e	19 ha (47 ac)			19 ha (47 ac)
Kauai 4— <i>Labordia lydgatei</i> —a	585 ha (1,447 ac)	2 ha (6 ac)		588 ha (1,453 ac)
Kauai 4— <i>Phyllostegia wawrana</i> —a	78 ha (194 ac)	273 ha (675 ac)		352 ha (869 ac)
Kauai 5— <i>Hibiscus clayi</i> —f	60 ha (148 ac)			60 ha (148 ac)
Kauai 5— <i>Munroidendron racemosum</i> —a	60 ha (148 ac)			60 ha (148 ac)
Kauai 6— <i>Brighamia insignis</i> —a		63 ha (156 ac)		63 ha (156 ac)
Kauai 7— <i>Brighamia insignis</i> —b		341 ha (842 ac)		341 ha (842 ac)
Kauai 7— <i>Delissea rhytidosperma</i> —a		221 ha (545 ac)		221 ha (545 ac)
Kauai 7— <i>Isodendron longifolium</i> —a		337 ha (833 ac)		337 ha (833 ac)
Kauai 7— <i>Lipochaeta micrantha</i> —a		341 ha (842 ac)		341 ha (842 ac)
Kauai 7— <i>Melicope haupuensis</i> —a		330 ha (816 ac)		330 ha (816 ac)
Kauai 7— <i>Munroidendron racemosum</i> —b		50 ha (123 ac)		50 ha (123 ac)
Kauai 7— <i>Myrsine linearifolia</i> —a		334 ha (826 ac)		334 ha (826 ac)
Kauai 7— <i>Peucedanum sandwicense</i> —a		21 ha (52 ac)		21 ha (52 ac)
Kauai 7— <i>Pteralyxia kauaiensis</i> —a		346 ha (854 ac)		346 ha (854 ac)
Kauai 7— <i>Schiedea nuttallii</i> —a		282 ha (697 ac)		282 ha (697 ac)
Kauai 8— <i>Sesbania tomentosa</i> —a		47 ha (115 ac)		47 ha (115 ac)
Kauai 9— <i>Schiedea spergulina</i> var. <i>leiopoda</i> —a		5 ha (11 ac)		5 ha (11 ac)
Kauai 10— <i>Adenophorus periens</i> —b	12 ha (29 ac)	480 ha (1,185 ac)		491 ha (1,215 ac)
Kauai 10— <i>Bonamia menziesii</i> —a	11 ha (28 ac)	409 ha (1,011 ac)		421 ha (1,039 ac)
Kauai 10— <i>Cyanea asarifolia</i> —b	161 ha (398 ac)	742 ha (1,834 ac)		903 ha (2,232 ac)
Kauai 10— <i>Cyanea remyi</i> —b		1,904 ha (4,705 ac)		1,904 ha (4,705 ac)
Kauai 10— <i>Cyanea undulata</i> —a	53 ha (130 ac)	952 ha (2,353 ac)		1,005 ha (2,484 ac)
Kauai 10— <i>Cyrtandra limahuliensis</i> —c	471 ha (1,164 ac)	1,542 ha (3,811 ac)		2,013 ha (4,975 ac)
Kauai 10— <i>Dubautia pauciflora</i> —a	38 ha (93 ac)	776 ha (1,919 ac)		814 ha (2,012 ac)
Kauai 10— <i>Exocarpos luteolus</i> —a	2 ha (5 ac)	399 ha (986 ac)		401 ha (991 ac)
Kauai 10— <i>Hesperonmannia lydgatei</i> —a		646 ha (1,596 ac)		646 ha (1,596 ac)
Kauai 10— <i>Isodendron longifolium</i> —b		142 ha (350 ac)		142 ha (350 ac)
Kauai 10— <i>Labordia lydgatei</i> —b	135 ha (333 ac)	900 ha (2,225 ac)		1,035 ha (2,558 ac)
Kauai 10— <i>Labordia tinifolia</i> var. <i>wahiawaensis</i> —a		913 ha (2,255 ac)		913 ha (2,255 ac)
Kauai 10— <i>Lysimachia filifolia</i> —a	171 ha (421 ac)	824 ha (2,037 ac)		995 ha (2,458 ac)
Kauai 10— <i>Myrsine linearifolia</i> —b	<1 ha (<1 ac)	167 ha (413 ac)		167 ha (413 ac)
Kauai 10— <i>Phlegmariurus nutans</i> —a	44 ha (108 ac)	577 ha (1,425 ac)		620 ha (1,533 ac)
Kauai 10— <i>Plantago princeps</i> —a	276 ha (683 ac)	<1 ha (<1 ac)		277 ha (683 ac)
Kauai 10— <i>Pteralyxia kauaiensis</i> —b	304 ha (751 ac)	<1 ha (<1 ac)		304 ha (751 ac)
Kauai 10— <i>Viola helenae</i> —a	13 ha (33 ac)	598 ha (1,477 ac)		611 ha (1,510 ac)
Kauai 10— <i>Viola kauaiensis</i> var. <i>wahiawaensis</i> —a	54 ha (134 ac)	603 ha (1,489 ac)		657 ha (1,623 ac)
Kauai 11— <i>Adenophorus periens</i> —c	301 ha (743 ac)	168 ha (415 ac)		469 ha (1,158 ac)
Kauai 11— <i>Adenophorus periens</i> —d	914 ha (2,259 ac)	92 ha (227 ac)		1,006 ha (2,485 ac)
Kauai 11— <i>Alectryon macrococcus</i> —a	382 ha (943 ac)			382 ha (943 ac)
Kauai 11— <i>Alectryon macrococcus</i> —b	90 ha (222 ac)			90 ha (222 ac)
Kauai 11— <i>Alsinidendron lychnoides</i> —a	992 ha (2,452 ac)	1 ha (3 ac)		994 ha (2,445 ac)
Kauai 11— <i>Alsinidendron lychnoides</i> —b	138 ha (340 ac)			138 ha (340 ac)
Kauai 11— <i>Alsinidendron lychnoides</i> —c	55 ha (136 ac)			55 ha (136 ac)
Kauai 11— <i>Alsinidendron viscosum</i> —a	736 ha (1,819 ac)			736 ha (1,819 ac)
Kauai 11— <i>Alsinidendron viscosum</i> —b	17 ha (42 ac)			17 ha (42 ac)
Kauai 11— <i>Alsinidendron viscosum</i> —c	22 ha (55 ac)			22 ha (55 ac)
Kauai 11— <i>Alsinidendron viscosum</i> —d	61 ha (150 ac)			61 ha (150 ac)
Kauai 11— <i>Bonamia menziesii</i> —b	93 ha (229 ac)			93 ha (229 ac)
Kauai 11— <i>Brighamia insignis</i> —c	1,639 ha (4,049 ac)			1,639 ha (4,049 ac)
Kauai 11— <i>Centaurium sebaeoides</i> —a	156 ha (385 ac)			156 ha (385 ac)
Kauai 11— <i>Chamaesyce halemanui</i> —a	108 ha (267 ac)			108 ha (267 ac)
Kauai 11— <i>Chamaesyce halemanui</i> —b	17 ha (43 ac)			17 ha (43 ac)
Kauai 11— <i>Chamaesyce halemanui</i> —c	1,283 ha (3,171 ac)			1,283 ha (3,171 ac)
Kauai 11— <i>Ctenitis squamigera</i> —a	735 ha (1,817 ac)			735 ha (1,817 ac)
Kauai 11— <i>Cyanea recta</i> —c	385 ha (951 ac)	168 ha (416 ac)		553 ha (1,367 ac)

TABLE 4.—APPROXIMATE CRITICAL HABITAT AREA DESIGNATED BY UNIT AND LANDOWNERSHIP OR JURISDICTION, KAUAI COUNTY, HAWAII—Continued

Unit name	State/local	Private	Federal	Total
Kauai 11— <i>Cyanea recta</i> —d	143 ha (352 ac)	255 ha (629 ac)		397 ha (981 ac)
Kauai 11— <i>Cyanea remyi</i> —c	365 ha (901 ac)			365 ha (901 ac)
Kauai 11— <i>Cyanea remyi</i> —d	342 ha (845 ac)	321 ha (794 ac)		663 ha (1,638 ac)
Kauai 11— <i>Cyperus trachysanthos</i> —a	432 ha (1,068 ac)			432 ha (1,068 ac)
Kauai 11— <i>Cyrtandra cyaneoides</i> —b	553 ha (1,366 ac)	295 ha (730 ac)		848 ha (2,095 ac)
Kauai 11— <i>Cyrtandra cyaneoides</i> —c	31 ha (78 ac)	1,085 ha (2,682 ac)		1,117 ha (2,759 ac)
Kauai 11— <i>Cyrtandra limahuliensis</i> —d	523 ha (1,292 ac)	293 ha (724 ac)		816 ha (2,016 ac)
Kauai 11— <i>Cyrtandra limahuliensis</i> —e	366 ha (905 ac)	327 ha (807 ac)		693 ha (1,712 ac)
Kauai 11— <i>Delissea rhytidosperra</i> —b	258 ha (638 ac)			258 ha (638 ac)
Kauai 11— <i>Delissea rhytidosperra</i> —c	103 ha (254 ac)			103 ha (254 ac)
Kauai 11— <i>Delissea rufularis</i> —a	850 ha (2,100 ac)			850 ha (2,100 ac)
Kauai 11— <i>Delissea undulata</i> —a	139 ha (344 ac)	118 ha (291 ac)		257 ha (635 ac)
Kauai 11— <i>Delissea undulata</i> —b	532 ha (1,314 ac)			532 ha (1,314 ac)
Kauai 11— <i>Diellia erecta</i> —a	364 ha (901 ac)			364 ha (901 ac)
Kauai 11— <i>Diellia pallida</i> —a	601 ha (1,485 ac)			601 ha (1,485 ac)
Kauai 11— <i>Diellia pallida</i> —b	55 ha (136 ac)			55 ha (136 ac)
Kauai 11— <i>Diplazium molokaiense</i> —a	430 ha (1,062 ac)			430 ha (1,062 ac)
Kauai 11— <i>Dubautia latifolia</i> —a	31 ha (76 ac)			31 ha (76 ac)
Kauai 11— <i>Dubautia latifolia</i> —b	1,522 ha (3,761 ac)			1,522 ha (3,761 ac)
Kauai 11— <i>Dubautia latifolia</i> —c	809 ha (1,999 ac)			809 ha (1,999 ac)
Kauai 11— <i>Euphorbia haeleleana</i> —a	263 ha (649 ac)			263 ha (649 ac)
Kauai 11— <i>Euphorbia haeleleana</i> —b	192 ha (476 ac)			192 ha (476 ac)
Kauai 11— <i>Euphorbia haeleleana</i> —c	204 ha (505 ac)			204 ha (505 ac)
Kauai 11— <i>Exocarpos luteolus</i> —b	3,705 ha (9,155 ac)	94 ha (232 ac)		3,799 ha (9,387 ac)
Kauai 11— <i>Exocarpos luteolus</i> —c	177 ha (438 ac)			177 ha (438 ac)
Kauai 11— <i>Exocarpos luteolus</i> —d	83 ha (206 ac)			83 ha (206 ac)
Kauai 11— <i>Exocarpos luteolus</i> —e	522 ha (1,290 ac)			522 ha (1,290 ac)
Kauai 11— <i>Flueggea neowawraea</i> —a	51 ha (126 ac)			51 ha (126 ac)
Kauai 11— <i>Flueggea neowawraea</i> —b	47 ha (117 ac)			47 ha (117 ac)
Kauai 11— <i>Flueggea neowawraea</i> —c	152 ha (376 ac)			152 ha (376 ac)
Kauai 11— <i>Flueggea neowawraea</i> —d	77 ha (191 ac)			77 ha (191 ac)
Kauai 11— <i>Flueggea neowawraea</i> —e	27 ha (67 ac)			27 ha (67 ac)
Kauai 11— <i>Flueggea neowawraea</i> —f	240 ha (594 ac)			240 ha (594 ac)
Kauai 11— <i>Gouania meyenii</i> —a	443 ha (1,094 ac)			443 ha (1,094 ac)
Kauai 11— <i>Gouania meyenii</i> —b	128 ha (316 ac)			128 ha (316 ac)
Kauai 11— <i>Gouania meyenii</i> —c	215 ha (532 ac)			215 ha (532 ac)
Kauai 11— <i>Hedyotis cookiana</i> —a	771 ha (1,905 ac)			771 ha (1,905 ac)
Kauai 11— <i>Hedyotis st. johnii</i> —a	238 ha (589 ac)			238 ha (589 ac)
Kauai 11— <i>Hesperomannia lydgatei</i> —b	314 ha (776 ac)	599 ha (1,480 ac)		913 ha (2,257 ac)
Kauai 11— <i>Hesperomannia lydgatei</i> —c	79 ha (196 ac)	101 ha (249 ac)		180 ha (444 ac)
Kauai 11— <i>Hibiscadelphus woodii</i> —a	278 ha (686 ac)			278 ha (686 ac)
Kauai 11— <i>Hibiscadelphus woodii</i> —b	72 ha (177 ac)			72 ha (177 ac)
Kauai 11— <i>Hibiscus waimeae</i> ssp. <i>hannerae</i> —a	565 ha (1,396 ac)	554 ha (1,370 ac)		1,119 ha (2,765 ac)
Kauai 11— <i>Ischaemum byrone</i> —d	45 ha (111 ac)			45 ha (111 ac)
Kauai 11— <i>Isodendron laurifolium</i> —a	401 ha (991 ac)			401 ha (991 ac)
Kauai 11— <i>Isodendron laurifolium</i> —b	400 ha (988 ac)			400 ha (988 ac)
Kauai 11— <i>Isodendron longifolium</i> —c	59 ha (146 ac)			59 ha (146 ac)
Kauai 11— <i>Isodendron longifolium</i> —d	493 ha (1,218 ac)			493 ha (1,218 ac)
Kauai 11— <i>Isodendron longifolium</i> —e	279 ha (690 ac)	101 ha (251 ac)		381 ha (941 ac)
Kauai 11— <i>Kokia kauaiensis</i> —a	155 ha (384 ac)			155 ha (384 ac)
Kauai 11— <i>Kokia kauaiensis</i> —b	30 ha (74 ac)			30 ha (74 ac)
Kauai 11— <i>Kokia kauaiensis</i> —c	667 ha (1,647 ac)			667 ha (1,647 ac)
Kauai 11— <i>Kokia kauaiensis</i> —d	126 ha (312 ac)			126 ha (312 ac)
Kauai 11— <i>Labordia lydgatei</i> —c	325 ha (803 ac)			325 ha (803 ac)
Kauai 11— <i>Labordia lydgatei</i> —d	82 ha (203 ac)			82 ha (203 ac)
Kauai 11— <i>Labordia lydgatei</i> —e	6 ha (16 ac)	111 ha (275 ac)		117 ha (290 ac)
Kauai 11— <i>Lipochaeta fauriei</i> —a	106 ha (262 ac)			106 ha (262 ac)
Kauai 11— <i>Lipochaeta fauriei</i> —b	545 ha (1,347 ac)			545 ha (1,347 ac)
Kauai 11— <i>Lipochaeta micrantha</i> —b	212 ha (523 ac)			212 ha (523 ac)
Kauai 11— <i>Lobelia niihauensis</i> —a	89 ha (220 ac)			89 ha (220 ac)
Kauai 11— <i>Lobelia niihauensis</i> —b	1,854 ha (4,582 ac)	147 ha (362 ac)		2,001 ha (4,944 ac)
Kauai 11— <i>Mariscus pennatifolius</i> —a	1,003 ha (2,479 ac)			1,003 ha (2,479 ac)
Kauai 11— <i>Melicope haupuensis</i> —b	574 ha (1,418 ac)			574 ha (1,418 ac)
Kauai 11— <i>Melicope haupuensis</i> —c	290 ha (716 ac)			290 ha (716 ac)
Kauai 11— <i>Melicope knudsenii</i> —a	966 ha (2,388 ac)			966 ha (2,388 ac)
Kauai 11— <i>Melicope knudsenii</i> —b	373 ha (922 ac)			373 ha (922 ac)
Kauai 11— <i>Melicope pallida</i> —a	143 ha (353 ac)			143 ha (353 ac)
Kauai 11— <i>Melicope pallida</i> —b	310 ha (765 ac)			310 ha (765 ac)
Kauai 11— <i>Munroidendron racemosum</i> —c	1,921 ha (4,747 ac)	29 ha (72 ac)		1,950 ha (4,819 ac)
Kauai 11— <i>Munroidendron racemosum</i> —d	153 ha (379 ac)			153 ha (379 ac)
Kauai 11— <i>Myrsine linearifolia</i> —c	684 ha (1,691 ac)			684 ha (1,691 ac)

TABLE 4.—APPROXIMATE CRITICAL HABITAT AREA DESIGNATED BY UNIT AND LANDOWNERSHIP OR JURISDICTION, KAUAI COUNTY, HAWAII—Continued

Unit name	State/local	Private	Federal	Total
Kauai 11— <i>Myrsine linearifolia</i> —d	125 ha (309 ac)	161 ha (397 ac)		286 ha (707 ac)
Kauai 11— <i>Myrsine linearifolia</i> —e	346 ha (854 ac)			346 ha (854 ac)
Kauai 11— <i>Myrsine linearifolia</i> —f	56 ha (139 ac)	79 ha (195 ac)		135 ha (334 ac)
Kauai 11— <i>Nothoecstrum peltatum</i> —a	427 ha (1,056 ac)			427 ha (1,056 ac)
Kauai 11— <i>Nothoecstrum peltatum</i> —b	1,464 ha (3,617 ac)			1,464 ha (3,617 ac)
Kauai 11— <i>Nothoecstrum peltatum</i> —c	80 ha (198 ac)			80 ha (198 ac)
Kauai 11— <i>Peucedanum sandwicense</i> —b	579 ha (1,430 ac)			579 ha (1,430 ac)
Kauai 11— <i>Peucedanum sandwicense</i> —c	181 ha (447 ac)			181 ha (447 ac)
Kauai 11— <i>Phyllostegia knudsenii</i> —a	297 ha (735 ac)			297 ha (735 ac)
Kauai 11— <i>Phyllostegia waimeae</i> —a	364 ha (901 ac)			364 ha (901 ac)
Kauai 11— <i>Phyllostegia wawrana</i> —b	973 ha (2,406 ac)	63 ha (156 ac)		1,037 ha (2,562 ac)
Kauai 11— <i>Phyllostegia wawrana</i> —c	108 ha (268 ac)			108 ha (268 ac)
Kauai 11— <i>Phyllostegia wawrana</i> —d	251 ha (619 ac)			251 ha (619 ac)
Kauai 11— <i>Plantago princeps</i> —b	126 ha (312 ac)			126 ha (312 ac)
Kauai 11— <i>Plantago princeps</i> —c	244 ha (603 ac)			244 ha (603 ac)
Kauai 11— <i>Plantago princeps</i> —d	77 ha (189 ac)			77 ha (189 ac)
Kauai 11— <i>Platanthera holochila</i> —a	4,053 ha (10,014 ac)	94 ha (232 ac)		4,146 ha (10,246 ac)
Kauai 11— <i>Poa mannii</i> —a	1,871 ha (4,624 ac)			1,871 ha (4,624 ac)
Kauai 11— <i>Poa mannii</i> —b	677 ha (1,673 ac)			677 ha (1,673 ac)
Kauai 11— <i>Poa mannii</i> —c	155 ha (382 ac)			155 ha (382 ac)
Kauai 11— <i>Poa mannii</i> —d	307 ha (758 ac)			307 ha (758 ac)
Kauai 11— <i>Poa sandwicensis</i> —a	1,111 ha (2,745 ac)			1,111 ha (2,745 ac)
Kauai 11— <i>Poa sandwicensis</i> —b	52 ha (129 ac)			52 ha (129 ac)
Kauai 11— <i>Poa siphonoglossa</i> —a	1,621 ha (4,006 ac)			1,621 ha (4,006 ac)
Kauai 11— <i>Poa siphonoglossa</i> —b	2,189 ha (5,408 ac)			2,189 ha (5,408 ac)
Kauai 11— <i>Pteralyxia kauaiensis</i> —c	209 ha (516 ac)			209 ha (516 ac)
Kauai 11— <i>Pteralyxia kauaiensis</i> —d	57 ha (141 ac)			57 ha (141 ac)
Kauai 11— <i>Pteralyxia kauaiensis</i> —e	353 ha (872 ac)			353 ha (872 ac)
Kauai 11— <i>Pteralyxia kauaiensis</i> —f	588 ha (1,453 ac)	<1 ha (<1 ac)		588 ha (1,453 ac)
Kauai 11— <i>Pteralyxia kauaiensis</i> —g	445 ha (1,100 ac)			445 ha (1,100 ac)
Kauai 11— <i>Remya kauaiensis</i> —a	172 ha (426 ac)			172 ha (426 ac)
Kauai 11— <i>Remya kauaiensis</i> —b	66 ha (163 ac)			66 ha (163 ac)
Kauai 11— <i>Remya kauaiensis</i> —c	886 ha (2,190 ac)			886 ha (2,190 ac)
Kauai 11— <i>Remya kauaiensis</i> —d	47 ha (115 ac)			47 ha (115 ac)
Kauai 11— <i>Remya kauaiensis</i> —e	66 ha (163 ac)			66 ha (163 ac)
Kauai 11— <i>Remya montgomeryi</i> —a	69 ha (171 ac)			69 ha (171 ac)
Kauai 11— <i>Remya montgomeryi</i> —b	1,010 ha (2,496 ac)			1,010 ha (2,496 ac)
Kauai 11— <i>Remya montgomeryi</i> —c	435 ha (1,076 ac)			435 ha (1,076 ac)
Kauai 11— <i>Schiedea apokremnos</i> —a	170 ha (420 ac)			170 ha (420 ac)
Kauai 11— <i>Schiedea apokremnos</i> —b	187 ha (463 ac)			187 ha (463 ac)
Kauai 11— <i>Schiedea apokremnos</i> —c	295 ha (730 ac)			295 ha (730 ac)
Kauai 11— <i>Schiedea helleri</i> —a	483 ha (1,194 ac)			483 ha (1,194 ac)
Kauai 11— <i>Schiedea helleri</i> —b	154 ha (381 ac)			154 ha (381 ac)
Kauai 11— <i>Schiedea helleri</i> —c	172 ha (426 ac)			172 ha (426 ac)
Kauai 11— <i>Schiedea kauaiensis</i> —a		12 ha (29 ac)		12 ha (29 ac)
Kauai 11— <i>Schiedea kauaiensis</i> —b	394 ha (974 ac)			394 ha (974 ac)
Kauai 11— <i>Schiedea kauaiensis</i> —c	510 ha (1,260 ac)			510 ha (1,260 ac)
Kauai 11— <i>Schiedea kauaiensis</i> —d	11 ha (28 ac)			11 ha (28 ac)
Kauai 11— <i>Schiedea membranacea</i> —a	251 ha (620 ac)			251 ha (620 ac)
Kauai 11— <i>Schiedea membranacea</i> —b	234 ha (579 ac)			234 ha (579 ac)
Kauai 11— <i>Schiedea membranacea</i> —c	527 ha (1,303 ac)			527 ha (1,303 ac)
Kauai 11— <i>Schiedea membranacea</i> —d	327 ha (809 ac)			327 ha (809 ac)
Kauai 11— <i>Schiedea spergulina</i> var. <i>spergulina</i> —a	131 ha (323 ac)			131 ha (323 ac)
Kauai 11— <i>Schiedea spergulina</i> var. <i>spergulina</i> —b	77 ha (191 ac)			77 ha (191 ac)
Kauai 11— <i>Schiedea stellarioides</i> —a	1,259 ha (3,112 ac)			1,259 ha (3,112 ac)
Kauai 11— <i>Schiedea stellarioides</i> —b	129 ha (320 ac)			129 ha (320 ac)
Kauai 11— <i>Solanum sandwicense</i> —a	2,443 ha (6,037 ac)			2,443 ha (6,037 ac)
Kauai 11— <i>Solanum sandwicense</i> —b	249 ha (614 ac)			249 ha (614 ac)
Kauai 11— <i>Spermolepis hawaiiensis</i> —a	96 ha (237 ac)			96 ha (237 ac)
Kauai 11— <i>Stenogyne campanulata</i> —a	425 ha (1,050 ac)			425 ha (1,050 ac)
Kauai 11— <i>Wilkesia hobdyi</i> —a	775 ha (1,914 ac)			775 ha (1,914 ac)
Kauai 11— <i>Xylosma crenatum</i> —a	840 ha (2,076 ac)			840 ha (2,076 ac)
Kauai 11— <i>Zanthoxylum hawaiiense</i> —a	523 ha (1,292 ac)			523 ha (1,292 ac)
Kauai 12— <i>Nothoecstrum peltatum</i> —d	162 ha (400 ac)			162 ha (400 ac)
Kauai 12— <i>Remya kauaiensis</i> —f	52 ha (128 ac)			52 ha (128 ac)
Kauai 12— <i>Xylosma crenatum</i> —b	52 ha (128 ac)			52 ha (128 ac)
Kauai 13— <i>Lipochaeta waimeaensis</i> —a	56 ha (139 ac)			56 ha (139 ac)
Kauai 13— <i>Schiedea spergulina</i> var. <i>spergulina</i> —c	221 ha (545 ac)			221 ha (545 ac)
Kauai 13— <i>Spermolepis hawaiiensis</i> —b	87 ha (215 ac)			87 ha (215 ac)
Kauai 14— <i>Panicum niihauense</i> —a	79 ha (196 ac)		40 ha (99 ac)	119 ha (294 ac)
Kauai 14— <i>Sesbania tomentosa</i> —b	44 ha (109 ac)			44 ha (109 ac)



TABLE 4.—APPROXIMATE CRITICAL HABITAT AREA DESIGNATED BY UNIT AND LANDOWNERSHIP OR JURISDICTION, KAUAI COUNTY, HAWAII—Continued

Unit name	State/local	Private	Federal	Total
Kauai 15— <i>Panicum niihauense</i> —b .....	.....	.....	15 ha (38 ac) .....	15 ha (38 ac)
Kauai 16— <i>Panicum niihauense</i> —c .....	.....	.....	11 ha (28 ac) .....	11 ha (28 ac)
Kauai 17— <i>Panicum niihauense</i> —d .....	23 ha (56 ac) .....	.....	5 ha (12 ac) .....	28 ha (68 ac)
Niihau 1— <i>Brighamia insignis</i> —a .....	.....	144 ha (357 ac) .....	.....	.....
Grand Total* .....	14,814 ha (36,606 ac).	6,360 ha (15,717 ac)	72 ha (177 ac) .....	21,266 ha (52,549 ac)

\*Totals take into consideration overlapping individual species units.

If a species is listed or critical habitat is designated, section 7(a)(2) of the Act requires Federal agencies to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal action agency must enter into consultation with us. Through this consultation, the action agency would ensure that the permitted actions do not destroy or adversely modify critical habitat.

Regulations at 50 CFR 402.16 require Federal agencies to reinstate consultation on previously reviewed actions under certain circumstances, including instances where critical habitat is subsequently designated and the Federal agency has retained discretionary involvement, or control has been retained or is authorized by law. Consequently, some Federal agencies may request reinitiation of consultation or conferencing with us on actions for which formal consultation has been completed, if those actions may affect designated critical habitat or adversely modify or destroy proposed critical habitat.

If we issue a biological opinion concluding that a project is likely to result in the destruction or adverse modification of critical habitat, we also provide “reasonable and prudent alternatives” to the project, if any are identifiable. Reasonable and prudent alternatives are defined at 50 CFR 402.02 as alternative actions identified during consultation that can be implemented in a manner consistent with the intended purpose of the action, that are consistent with the scope of the Federal agency’s legal authority and jurisdiction, that are economically and technologically feasible, and that the Director believes would avoid destruction or adverse modification of critical habitat. Reasonable and prudent alternatives can vary from slight project modifications to extensive redesign or relocation of the project. Costs associated with implementing a

reasonable and prudent alternative are similarly variable.

Activities on Federal lands that may affect critical habitat of one or more of the 83 plant species from Kauai and Niihau will require section 7 consultation. Activities on private or State lands requiring a permit from a Federal agency, such as a permit from the U.S. Army Corps of Engineers (Corps) under section 404 of the Clean Water Act (33 U.S.C. 1344 *et seq.*), the Department of Housing and Urban Development, or a section 10(a)(1)(B) permit from us; or some other Federal action, including funding (*e.g.*, from the Federal Highway Administration, Federal Aviation Administration (FAA), Federal Emergency Management Agency (FEMA), Environmental Protection Agency (EPA), or Department of Energy); regulation of airport improvement activities by the FAA; and construction of communication sites licensed by the Federal Communications Commission will also continue to be subject to the section 7 consultation process. Federal actions not affecting critical habitat and actions on non-Federal lands that are not federally funded, authorized, or permitted do not require section 7 consultation.

Section 4(b)(8) of the Act requires us to briefly describe and evaluate in any proposed or final regulation that designates critical habitat those activities involving a Federal action that may adversely modify such habitat or that may be affected by such designation. We note that such activities may also jeopardize the continued existence of the species.

Activities that, when carried out, funded, or authorized by a Federal agency, may directly or indirectly destroy or adversely modify critical habitat include, but are not limited to:

(1) Activities that appreciably degrade or destroy the primary constituent elements including, but not limited to: Overgrazing; maintenance of feral ungulates; clearing or cutting of native live trees and shrubs, whether by burning or mechanical, chemical, or

other means (*e.g.*, woodcutting, bulldozing, construction, road building, mining, herbicide application); introducing or enabling the spread of nonnative species; and taking actions that pose a risk of fire;

(2) Activities that alter watershed characteristics in ways that would appreciably reduce groundwater recharge or alter natural, dynamic wetland or other vegetative communities. Such activities may include water diversion or impoundment, excess groundwater pumping, manipulation of vegetation such as timber harvesting, residential and commercial development, and grazing of livestock that degrades watershed values;

(3) Rural residential construction that includes concrete pads for foundations and the installation of septic systems in wetlands where a permit under section 404 of the Clean Water Act would be required by the Corps;

(4) Recreational activities that appreciably degrade vegetation;

(5) Mining of sand or other minerals;

(6) Introducing or encouraging the spread of nonnative plant species into critical habitat units; and

(7) Importation of nonnative species for research, agriculture, and aquaculture, and the release of biological control agents that would have unanticipated effects on the listed species and the primary constituent elements of their habitat.

If you have questions regarding whether specific activities will likely constitute adverse modification of critical habitat, contact the Field Supervisor, Pacific Islands Ecological Services Field Office (*see ADDRESSES* section). Requests for copies of the regulations on listed plants and animals, and inquiries about prohibitions and permits may be addressed to the U.S. Fish and Wildlife Service, Branch of Endangered Species/Permits, 911 N.E. 11th Ave., Portland, Oregon 97232-4181 (telephone 503/231-2063; facsimile 503/231-6243).

*Analysis of Impacts Under Section 4(b)(2)*

Section 4(b)(2) of the Act requires us to designate critical habitat on the basis of the best scientific and commercial information available and to consider the economic and other relevant impacts of designating a particular area as critical habitat. We may exclude areas from critical habitat upon a determination that the benefits of such exclusions outweigh the benefits of specifying such areas as critical habitat. We cannot exclude areas from critical habitat when such exclusion will result in the extinction of the species concerned.

Following the publication of the revised proposed critical habitat designation on January 28, 2002, a draft economic analysis was conducted to estimate the potential economic impact of the designation, in accordance with recent decisions in the *N.M.*

*Cattlegrowers Ass'n v. U.S. Fish and Wildlife Serv.*, 248 F.3d 1277 (10th Cir. 2001). The draft analysis was made available for review on May 28, 2002 (67 FR 36851). We accepted comments on the draft analysis until the comment period closed on September 30, 2002.

Our draft economic analysis evaluated the potential future effects of section 7 of the Act associated with the listing of the 83 species (*Adenophorus periens*, *Alectryon macrococcus*, *Alsinidendron lychnoides*, *Alsinidendron viscosum*, *Bonamia menziesii*, *Brighamia insignis*, *Centaurium sebaeoides*, *Chamaesyce halemanui*, *Ctenitis squamigera*, *Cyanea asarifolia*, *Cyanea recta*, *Cyanea remyi*, *Cyanea undulata*, *Cyperus trachysanthos*, *Cyrtandra cyaneoides*, *Cyrtandra limahuliensis*, *Delissea rhytidosperra*, *Delissea rivularis*, *Delissea undulata*, *Diellia erecta*, *Diellia pallida*, *Diplazium molokaiense*, *Dubautia latifolia*, *Dubautia pauciflorula*, *Euphorbia haeleleana*, *Exocarpos luteolus*, *Flueggea neowawraea*, *Gouania meyenii*, *Hedyotis cookiana*, *Hedyotis st.-johnii*, *Hesperomannia lydgatei*, *Hibiscadelphus woodii*, *Hibiscus clayi*, *Hibiscus waimeae* ssp. *hannerae*, *Ischaemum byrone*, *Isodendron laurifolium*, *Isodendron longifolium*, *Kokia kauaiensis*, *Labordia lydgatei*, *Labordia tinifolia* var. *wahiawaensis*, *Lipochaeta fauriei*, *Lipochaeta micrantha*, *Lipochaeta waimeaensis*, *Lobelia niuhauensis*, *Lysimachia filifolia*, *Mariscus pennatifolius*, *Melicope haupuensis*, *Melicope knudsenii*, *Melicope pallida*, *Munroidendron racemosum*, *Myrsine linearifolia*, *Nothoctrum peltatum*, *Panicum niuhauense*, *Peucedanum*

*sandwicense*, *Phlegmariurus nutans*, *Phyllostegia knudsenii*, *Phyllostegia waimeae*, *Phyllostegia wawrana*, *Plantago princeps*, *Platanthera holochila*, *Poa mannii*, *Poa sandwicensis*, *Poa siphonoglossa*, *Pteralyxia kauaiensis*, *Remya kauaiensis*, *Remya montgomeryi*, *Schiedea apokremnos*, *Schiedea helleri*, *Schiedea kauaiensis*, *Schiedea membranacea*, *Schiedea nuttallii*, *Schiedea spergulina* var. *leiopoda*, *Schiedea spergulina* var. *spergulina*, *Schiedea stellarioides*, *Sesbania tomentosa*, *Solanum sandwicense*, *Spermalopsis hawaiiensis*, *Stenogyne campanulata*, *Viola helenae*, *Viola kauaiensis* var. *wahiawaensis*, *Wilkesia hobdyi*, *Xylosma crenatum*, and *Zanthoxylum hawaiiense*), as well as any potential effect of the critical habitat designation above and beyond the impacts associated with listing. To quantify the proportion of total potential economic impacts attributable to the critical habitat designation, the analysis evaluated a "without critical habitat" baseline and compared it to a "with critical habitat" scenario. The "without critical habitat" baseline represented the current and expected economic activity under all modifications prior to the critical habitat designation, including protections afforded the species under Federal and State laws. The difference between the two scenarios measured the net change in economic activity attributable to the designation of critical habitat. The categories of potential costs considered in the analysis included the costs associated with: (1) Conducting section 7 consultations associated with the listing or with the critical habitat, including incremental consultations and technical assistance; (2) modifications to projects, activities, or land uses resulting from the section 7 consultations; (3) potential delays associated with reinitiating completed consultations after critical habitat is finalized; (4) uncertainty and public perceptions resulting in loss of land value from the designation of critical habitat; (5) potential effects on property values including potential indirect costs resulting from the loss of hunting opportunities and increased regulation related costs due to the interaction of State and local laws; and (6) potential offsetting benefits associated with critical habitat, including educational benefits. The most likely economic effects of critical habitat designation are on activities funded, authorized, or carried out by a Federal agency.

Following the close of the comment period on the draft economic analysis, a final addendum was completed which

incorporated public comments on the draft analysis and made other changes in the draft as necessary. Together, these constitute our final economic analysis. The addendum to the draft economic analysis estimates that, over the next 10 years, the designation may result in potential direct economic effects of between approximately \$178,200 and \$1,124,800, and concludes that economic impacts from the designation of critical habitat for the 83 species would not be significant. This is a reduction of between approximately \$799,700 and \$1,318,430 from the costs estimated in the original draft economic analysis, and is due to the exclusion of the proposed unit Kauai D1 from final designation and the significant reduction in size to proposed units Kauai A2, Kauai B, Kauai C, Kauai D2, Kauai E, Kauai G, Kauai H1, H2, and H3, Kauai I, Kauai J, Kauai K, Kauai L, Kauai M, Kauai N, Kauai O and Niihau A (designation of 21,410 ha (52,906 ac) versus the 40,429 ha (99,903 ac) proposed as critical habitat, a reduction of approximately 19,019 ha (46,997 ac)). As described in the analysis, direct costs result from section 7 consultations and project modifications at the Pacific Missile Range Facility while there is a small risk of compromising national defense as an indirect cost. Other indirect costs include: a reduction in State and County development approvals; a change in game management to reduce ungulates and as a result hunting activity; mandated conservation management; redistributing by the State of land in the Urban and Agricultural Districts to the Conservation District; and a loss in landowner participation in conservation projects. However, these indirect costs are not subject to accurate quantification and had slight to small probabilities of occurring. Therefore, we do not believe that they are significant. A more detailed discussion of our economic analysis is contained in the draft economic analysis and the addendum. Both documents are available for inspection at the Pacific Islands Fish and Wildlife Office (*see ADDRESSES* section).

No critical habitat units in the proposed rule were excluded or modified due to economic impacts. However, as described above, section 4(b)(2) of the Act requires us to consider other relevant impacts, in addition to economic impacts, of designating critical habitat. No critical habitat units were excluded or modified due to non-economic impacts. (While units were excluded or reduced, as noted above, because they lacked primary constituent

elements or were more degraded than other available proposed or designated habitat for the species.) Thus this final rule represents no increase in impacts beyond the revised proposed rule.

### Taxonomic Changes

At the time we listed *Cyrtandra limahuliensis*, *Delissea undulata*, *Hibiscus brackenridgei*, *Lipochaeta fauriei*, *Lipochaeta micrantha*, *Lipochaeta waimeaensis*, and *Mariscus pennatifolius*, we followed the taxonomic treatments in Wagner *et al.* (1990), the widely used and accepted *Manual of the Flowering Plants of Hawaii*. Subsequent to the final listing, we became aware of new taxonomic treatments of these species. Also, the soon-to-be-published book *Hawaii's Ferns and Fern Allies* (Palmer, in press) has changed the family name for *Ctenitis squamigera* (from Aspleniaceae to Dryopteridaceae). Due to the court-ordered deadlines, we are required to publish this final rule to designate critical habitat on Kauai and Niihau before we can prepare and publish a notice of taxonomic changes for these eight species. We plan to publish a taxonomic change notice for these eight species after we have published the final critical habitat designations on Kauai and Niihau.

### Required Determinations

#### Regulatory Planning and Review

In accordance with Executive Order 12866, the Office of Management and Budget (OMB) has determined that this is a significant regulatory action because it may raise novel legal or policy issues. As required by the executive order, we have provided a copy of the rule, which describes the need for this action and how designation meets that need and the economic analysis, which assesses the costs and benefits of this critical habitat designation, to OMB for review. OMB did not recommend or make any changes in this regulatory action.

#### Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*)

Under the Regulatory Flexibility Act (RFA) (as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), whenever a Federal agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effect of the rule on small entities (*i.e.*, small businesses, small organizations, and small governmental jurisdictions). However, no regulatory flexibility

analysis is required if the head of the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities.

SBREFA amended the RFA to require Federal agencies to provide a statement of the factual basis for certifying that a rule will not have a significant economic impact on a substantial number of small entities.

Federal courts and Congress have indicated that an RFA/SBREFA analysis may be limited to all impacts to entities directly subject to the requirements of the regulation (Service 2002). As such, entities indirectly impacted by the plant listings and critical habitat and, therefore, not directly regulated by the listing or critical habitat designation are not considered in this section of the analysis.

In today's rule, we are certifying that the designation of critical habitat for the 83 Kauai and Niihau species will not have a significant effect on a substantial number of small entities. The following discussion explains our rationale.

Small entities include small organizations, such as independent non-profit organizations, and small governmental jurisdictions, including school boards and city and town governments that serve fewer than 50,000 residents, as well as small businesses. Small businesses include manufacturing and mining concerns with fewer than 500 employees, wholesale trade entities with fewer than 100 employees, retail and service businesses with less than \$5 million in annual sales, general and heavy construction businesses with less than \$27.5 million in annual business, special trade contractors doing less than \$11.5 million in annual business, and agricultural businesses with annual sales less than \$750,000. To determine if potential economic impacts to these small entities are significant, we consider the types of activities that might trigger regulatory impacts under this rule as well as the types of project modifications that may result. In general, the term "significant economic impact" is meant to apply to a typical small business firm's business operations.

To determine if the rule would affect a substantial number of small entities, we consider the number of small entities affected within particular types of economic activities (*e.g.*, housing development, grazing, oil and gas production, timber harvesting, etc.). We apply the "substantial number" test individually to each industry to determine if certification is appropriate. In estimating the numbers of small entities potentially affected, we also

consider whether their activities have any Federal involvement; some kinds of activities are unlikely to have any Federal involvement and so will not be affected by critical habitat designation.

Designation of critical habitat only affects activities conducted, funded, or permitted by Federal agencies; non-Federal activities are not affected by the designation. In areas where the species are present, Federal agencies are already required to consult with us under section 7 of the Act on activities that they fund, permit, or implement that may affect any one of the 83 species. Federal agencies must also consult with us if their activities may affect critical habitat. However, in areas where the species are present, we do not believe that this will result in any additional regulatory burden on Federal agencies or their applicants because consultation would already be required due to the presence of the listed species, and the duty to avoid adverse modification of critical habitat likely would not trigger additional regulatory impacts beyond the duty to avoid jeopardizing the species.

Even if the duty to avoid adverse modification does not trigger additional regulatory impacts in areas where the species is present, designation of critical habitat could result in an additional economic burden on small entities due to the requirement to reinstate consultation for ongoing Federal activities. However, since these 83 plant species were listed (between 1991 and 1996), there have been no formal consultations, and we have conducted only six informal consultations, in addition to consultations on Federal grants to State wildlife programs, which would not affect small entities. On the island of Kauai the six informal consultations have concerned nine of the 83 species (*Alsinidendron lychnoides*, *Cyanea recta*, *Cyrtandra limahuliensis*, *Diellia erecta*, *Dubautia latifolia*, *Exocarpos luteolus*, *Panicum niihauense*, *Sesbania tomentosa*, and *Wilkesia hobyi*) and were conducted with the Corps, Navy, and the U.S. Department of Agriculture. One informal consultation was conducted on behalf of the Corps for the Defense Environmental Restoration Program, who requested a list of endangered species on a site formerly used by the Department of Defense at the Wailua Impact Area. Three of the 83 species, *Cyanea recta*, *Cyrtandra limahuliensis*, and *Exocarpos luteolus*, were reported from the project area. Four informal consultations were conducted with the Navy: one for the construction of a missile support facility at the PMRF at Barking Sands regarding several listed

animals and *Sesbania tomentosa*; one on the PMRF's Enhanced Capability regarding several listed animals and *Panicum niihauense* and *Sesbania tomentosa*; one for the mountaintop surveillance sensor test integration center facility at PMRF at Barking Sands regarding several listed animals and *Panicum niihauense*, and *Sesbania tomentosa*; and one for the Navy's INRMP for PMRF at Barking Sands regarding several listed animals and *Wilkesia hobyi* at Makaha Ridge. In addition, *Panicum niihauense* and *Sesbania tomentosa* were identified as occurring in Polihale State Park, adjacent to the Naval facility. The sixth informal consultation was conducted on several listed animals, *Alsinidendron lychnoides*, *Diellia erecta*, and *Dubautia latifolia* with the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) through their Wildlife Incentive Program for noxious weed control actions on leased cabin lots within Kokee State Park. NRCS does not anticipate the need to reinitiate consultation for these on-going actions as they are not occurring within the areas of designated critical habitat (Terrell Kelly, NRCS, pers. comm., 2001).

Except for the NRCS project, none of these consultations affected or concerned small entities. However, the NRCS project is not occurring within the designated critical habitat. In all six consultations, we concurred with each agency's determination that the project, as proposed, was not likely to adversely affect listed species. With the exception of the NRCS project, none of the other consultations affected or concerned small entities, and none of the proposed projects are ongoing. As a result, the requirement to reinitiate consultation for ongoing projects will not affect a substantial number of small entities on Kauai.

There have been no consultations on any of these 83 species on the island of Niihau. Therefore, the requirement to reinitiate consultations for ongoing projects will not affect a substantial number of small entities on Niihau.

In areas where the species is clearly not present, designation of critical habitat could trigger additional review of Federal activities under section 7 that would otherwise not be required. However, there will be little additional impact on State and local governments and their activities because all but one of the critical habitat areas are occupied by at least one species. Other than the federally funded PMRF and NRCS projects, we are aware of relatively few activities in the designated critical habitat areas for these 83 plants that

have Federal involvement, and thus, would require consultation for on going projects. As mentioned above, we have conducted no formal consultations and only six informal consultations under section 7 on Kauai to date which involved only nine of the 83 species. As a result, we cannot easily identify future consultations that may be due to the listing of the species or the increment of additional consultations that may be required by this critical habitat designation. Therefore, for the purposes of this review and certification under the Regulatory Flexibility Act, we are assuming that any future consultations in the area designated as critical habitat will be due to the critical habitat designations.

On Kauai, the designations are on Federal, State, or private land. Nearly all of the land within the critical habitat units is unsuitable for development, land uses, and activities. This is due to their remote locations, lack of access, and rugged terrain. Almost all of this land (nearly 100 percent) is within the State Conservation District where State land-use controls severely limit development and most activities. Less than one percent of this land is within the State Agricultural District, and less than one percent is within the State Rural District. On non-Federal lands, activities that lack Federal involvement would not be affected by the critical habitat designations. However, activities of an economic nature that are likely to occur on non-Federal lands in the area encompassed by these designations consist of improvements in communications and tracking facilities; ranching; road improvements; recreational use, such as hiking, camping, picnicking, game hunting, and fishing; botanical gardens; and crop farming. With the exception of communications and tracking facilities improvements by the FAA or the Federal Communications Commission, these activities are unlikely to have Federal involvement. On lands that are in agricultural production, the types of activities that might trigger a consultation include irrigation ditch system projects that may require section 404 authorizations from the Corps, and watershed management and restoration projects sponsored by NRCS. However the NRCS restoration projects typically are voluntary, and the irrigation ditch system projects within lands that are in agricultural production are rare and may affect only a small percentage of the small entities within these critical habitat designations.

Lands that are within the State Urban District are primarily located within undeveloped coastal areas. The types of

activities that might trigger a consultation include shoreline restoration or modification projects that may require section 404 authorizations from the Corps or FEMA, housing or resort development that may require permits from the Department of Housing and Urban Development, small farms that may receive funding or require authorizations from the Department of Agriculture, watershed management and restoration projects sponsored by NRCS, and activities funded or authorized by the EPA. However, we are not aware of a significant number of future activities that would require Federal funds, permits, or authorizations in these coastal areas. Therefore, we conclude that the rule would not affect a substantial number of small entities. We are not aware of any commercial activities on the Federal lands included in these critical habitat designations.

The entire island of Niihau is under one private ownership and within the State Agricultural District. The current and projected land uses on Niihau are cattle and sheep ranching, commercial game hunting, and military exercises to train downed combat pilots on how to evade capture (Decision Analysts Hawaii (DAHI) 2001). The rule would not affect a substantial number of small agricultural entities on the island of Niihau. Therefore, we conclude that the rule would not affect a substantial number of small entities.

We also considered the likelihood that this rule would result in significant economic impacts to small entities. In general, two different mechanisms in section 7 consultations could lead to additional regulatory requirements. First, if we conclude, in a biological opinion, that a proposed action is likely to jeopardize the continued existence of a species or adversely modify its critical habitat, we can offer "reasonable and prudent alternatives." Reasonable and prudent alternatives are alternative actions that can be implemented in a manner consistent with the scope of the Federal agency's legal authority and jurisdiction, that are economically and technologically feasible, and that would avoid jeopardizing the continued existence of listed species or resulting in adverse modification of critical habitat. A Federal agency and an applicant may elect to implement a reasonable and prudent alternative associated with a biological opinion that has found jeopardy or adverse modification of critical habitat. An agency or applicant could alternatively choose to seek an exemption from the requirements of the Act or proceed without implementing the reasonable and prudent alternative. However, unless an exemption were

obtained, the Federal agency or applicant would be at risk of violating section 7(a)(2) of the Act if it chose to proceed without implementing the reasonable and prudent alternatives. Second, if we find that a proposed action is not likely to jeopardize the continued existence of a listed animal species, we may identify reasonable and prudent measures designed to minimize the amount or extent of take and require the Federal agency or applicant to implement such measures through non-discretionary terms and conditions. However, the Act does not prohibit the take of listed plant species or require terms and conditions to minimize adverse effect on critical habitat. We may also identify discretionary conservation recommendations designed to minimize or avoid the adverse effects of a proposed action on listed species or critical habitat, help implement recovery plans, or to develop information that could contribute to the recovery of the species.

Even where the requirements of section 7 might apply due to critical habitat, based on our experience with section 7 consultations for all listed species, virtually all projects—including those that, in their initial proposed form, would result in jeopardy or adverse modification determinations under section 7—can be implemented successfully with, at most, the adoption of reasonable and prudent alternatives. These measures by definition must be economically feasible and within the scope of authority of the Federal agency involved in the consultation. As we have a very limited consultation history for these 83 species from Kauai and Niihau, we can only describe the general kinds of actions that may be identified in future reasonable and prudent alternatives. These are based on our understanding of the needs of these species and the threats they face, especially as described in the final listing rules and in this critical habitat designation, as well as our experience with similar listed plants in Hawaii. In addition, all of these species are protected under the State of Hawaii's Endangered Species Act (Hawaii Revised Statutes, Chap. 195D-4). Therefore, we have also considered the kinds of actions required under the State licensing process for these species. The kinds of actions that may be included in future reasonable and prudent alternatives include conservation set-asides; management of competing nonnative species; restoration of degraded habitat; propagation; outplanting and augmentation of existing populations;

construction of protective fencing; and periodic monitoring. These measures are not likely to result in a significant economic impact to a substantial number of small entities because any measure included as a reasonable and prudent alternative would have to be economically feasible to an individual landowner, and because as discussed above, we do not believe there will be a substantial number of small entities affected by the Act's consultation requirements.

In summary, we have considered whether this final rule would result in a significant economic effect on a substantial number of small entities and have concluded that it would not affect a substantial number of small entities. Approximately 70 percent of the lands designated as critical habitat are State lands. The State of Hawaii is not a small entity. Less than one percent of the lands designated as critical habitat are Federal lands. The Federal Government is not a small entity. Approximately 30 percent of the lands designated as critical habitat are private lands. Many of these parcels are located in areas where likely future land uses are not expected to result in Federal involvement or section 7 consultations. As discussed earlier, most of the private and State parcels within the designation are currently being used for recreational and agricultural purposes and, therefore, are not likely to require any Federal authorization. In the remaining areas, Federal involvement—and thus section 7 consultations, the only trigger for economic impact under this rule—would be limited to a subset of the area being designated. The most likely future section 7 consultations resulting from this rule would be for informal consultations on federally funded land and water conservation projects, species-specific surveys and research projects, and watershed management and restoration projects sponsored by NRCS and the Service. These consultations would likely occur on only a subset of the total number of parcels and therefore would not be likely to affect a substantial number of small entities. This rule would result in project modifications only when proposed Federal activities would destroy or adversely modify critical habitat. While this may occur, it is not expected frequently enough to affect a substantial number of small entities. Even when it does occur, we do not expect it to result in a significant economic impact, as the measures included in reasonable and prudent alternatives must be economically feasible and consistent with the

proposed action. Therefore, we are certifying that the designation of critical habitat for *Adenophorus periens*, *Alectryon macrococcus*, *Alsinidendron lychnoides*, *Alsinidendron viscosum*, *Bonamia menziesii*, *Brighamia insignis*, *Centaurium sebaeoides*, *Chamaesyce halemanui*, *Ctenitis squamigera*, *Cyanea asarifolia*, *Cyanea recta*, *Cyanea remyi*, *Cyanea undulata*, *Cyperus trachysanthos*, *Cyrtandra cyaneoides*, *Cyrtandra limahuliensis*, *Delissea rhytidosperma*, *Delissea rivularis*, *Delissea undulata*, *Diellia erecta*, *Diellia pallida*, *Diplazium molokaiense*, *Dubautia latifolia*, *Dubautia pauciflora*, *Euphorbia haeleleana*, *Exocarpos luteolus*, *Flueggea neowawraea*, *Gouania meyenii*, *Hedyotis cookiana*, *Hedyotis st.-johnii*, *Hesperomannia lydgatei*, *Hibiscadelphus woodii*, *Hibiscus clayi*, *Hibiscus waimeae* ssp. *hannerae*, *Ischaemum byrone*, *Isodendron laurifolium*, *Isodendron longifolium*, *Kokia kauaiensis*, *Labordia lydgatei*, *Labordia tinifolia* var. *wahiawaensis*, *Lipochaeta fauriei*, *Lipochaeta micrantha*, *Lipochaeta waimeae*, *Lobelia niihauensis*, *Lysimachia filifolia*, *Mariscus pennatifolmis*, *Melicope haupuensis*, *Melicope knudsenii*, *Melicope pallida*, *Munroidendron racemosum*, *Myrsine linearifolia*, *Nothoestrum peltatum*, *Panicum niihauense*, *Peucedanum sandwicense*, *Phlegmariurus nutans*, *Phyllostegia knudsenii*, *Phyllostegia waimeae*, *Phyllostegia wawrana*, *Plantago princeps*, *Platanthera holochila*, *Poa mannii*, *Poa sandwicensis*, *Poa siphonoglossa*, *Pteralyxia kauaiensis*, *Remya kauaiensis*, *Remya montgomeryi*, *Schiedea apokremnos*, *Schiedea helleri*, *Schiedea kauaiensis*, *Schiedea membranacea*, *Schiedea nuttallii*, *Schiedea spergulina* var. *leiopoda*, *Schiedea spergulina* var. *spergulina*, *Schiedea stellarioides*, *Sesbania tomentosa*, *Solanum sandwicense*, *Spermolepis hawaiiensis*, *Stenogyne campanulata*, *Viola helenae*, *Viola kauaiensis* var. *wahiawaensis*, *Wilkesia hobdyi*, *Xylosma crenatum*, and *Zanthoxylum hawaiiense* will not have a significant economic impact on a substantial number of small entities. Therefore a regulatory flexibility analysis is not required.

*Small Business Regulatory Enforcement Fairness Act (5 U.S.C. 804(2))*

Under the Small Business Regulatory Enforcement Fairness Act (5 U.S.C. 801 *et seq.*), this rule is not a major rule. Our detailed assessment of the economic effects of this designation are described in the draft economic analysis and the

final addendum to the economic analysis. Based on the effects identified in these documents, we believe that this rule will not have an effect on the economy of \$100 million or more, will not cause a major increase in costs or prices for consumers, and will not have significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of U.S.-based enterprises to compete with foreign-based enterprises. Refer to the final addendum to the economic analysis for a discussion of the effects of this determination.

#### *Executive Order 13211*

On May 18, 2001, the President issued Executive Order 13211 on regulations that significantly affect energy supply, distribution, and use. Executive Order 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. Although this rule is a significant regulatory action under Executive Order 12866, it is not expected to significantly affect energy production supply and distribution facilities because no significant energy production, supply, and distribution facilities are included within designated critical habitat. Further, for the reasons described in the economic analysis, we do not believe that designation of critical habitat for the 83 plant species will affect future energy production. Therefore, this action is not a significant energy action, and no Statement of Energy Effects is required.

#### *Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)*

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.):

(a) This rule will not “significantly or uniquely” affect small governments. A Small Government Agency Plan is not required. Small governments will not be affected unless they propose an action requiring Federal funds, permits or other authorizations. Any such activities will require that the Federal agency ensure that the action will not adversely modify or destroy designated critical habitat.

(b) This rule will not produce a Federal mandate on State or local governments or the private sector of \$100 million or greater in any year, that is, it is not a “significant regulatory action” under the Unfunded Mandates Reform Act. The designation of critical habitat imposes no obligations on State or local governments.

#### *Takings*

In accordance with Executive Order 12630 (“Government Actions and Interference with Constitutionally Protected Private Property Rights”), we have analyzed the potential takings implications of designating critical habitat for the 83 species from Kauai and Niihau in a takings implications assessment. The takings implications assessment concludes that this final rule does not pose significant takings implications.

#### *Federalism*

In accordance with Executive Order 13132, this final rule does not have significant Federalism effects. A Federalism assessment is not required. In keeping with Department of Interior policy, we requested information from appropriate State agencies in Hawaii. This rule imposes no regulatory requirements unless an agency is seeking Federal funding or authorization, so it does not have Federal implications. In addition, this rule will not have substantial direct compliance costs because many of the planned projects that could affect critical habitat have no Federal involvement.

The designations may have some benefit to these governments, in that the areas essential to the conservation of these species are more clearly defined, and the primary constituent elements of the habitat necessary to the survival of the species are specifically identified. While this definition and identification does not alter where and what federally sponsored activities may occur, it may assist these local governments in long-range planning, rather than waiting for case-by-case section 7 consultation to occur.

#### *Civil Justice Reform*

In accordance with Executive Order 12988, the Department of the Interior’s Office of the Solicitor has determined that this rule does not unduly burden the judicial system and does meet the requirements of sections 3(a) and 3(b)(2) of the Order. We have designated critical habitat in accordance with the provisions of the Endangered Species Act. The rule uses standard property descriptions and identifies the primary constituent elements within the designated areas to assist the public in understanding the habitat needs of the 83 plant species from Kauai and Niihau.

#### *Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)*

This rule does not contain any information collection requirements for which OMB approval under the

Paperwork Reduction Act is required. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number.

#### *National Environmental Policy Act*

We have determined that we do not need to prepare an Environmental Assessment and/or an Environmental Impact Statement as defined by the National Environmental Policy Act of 1969 in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act. We published a notice outlining our reason for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This determination does not constitute a major Federal action significantly affecting the quality of the human environment.

#### *Government-to-Government Relationship With Tribes*

In accordance with the President’s memorandum of April 29, 1994, “Government-to-Government Relations with Native American Tribal Governments” (59 FR 22951) Executive Order 13175 and the Department of the Interior’s manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. We have determined that there are no Tribal lands essential for the conservation of these 83 plant species.

Therefore, designation of critical habitat for these 83 species does not involve any Tribal lands.

#### **References Cited**

A complete list of all references cited in this final rule is available upon request from the Pacific Islands Fish and Wildlife Office (*see ADDRESSES* section).

#### **Authors**

The primary authors of this final rule are staff of the Pacific Islands Fish and Wildlife Office (*see ADDRESSES* section).

#### **List of Subjects in 50 CFR Part 17**

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

#### **Regulation Promulgation**

Accordingly, we hereby amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations as set forth below:

**PART 17—[AMENDED]**

1. The authority citation for part 17 continues to read as follows:

**Authority:** 16 U.S.C. 1361–1407; 16 U.S.C. 1531–1544; 16 U.S.C. 4201–4245; Pub. L. 99–625, 100 Stat. 3500; unless otherwise noted.

2. Amend § 17.12(h), the List of Endangered and Threatened Plants, as follows:

a. Under the table's heading FLOWERING PLANTS, by revising the entries for *Alectryon macrococcus*, *Alsinidendron lychnoides*, *Alsinidendron viscosum*, *Bonamia menziesii*, *Brighamia insignis*, *Centaurium sebaeoides*, *Chamaesyce halemanui*, *Cyanea asarifolia*, *Cyanea recta*, *Cyanea remyi*, *Cyanea undulata*, *Cyperus trachyanthos*, *Cyrtandra cyaneoides*, *Cyrtandra limahuliensis*, *Delissea rhytidosperma*, *Delissea rivularis*, *Delissea undulata*, *Dubautia latifolia*, *Dubautia pauciflora*, *Euphorbia haeleeleana*, *Exocarpos*

*luteolus*, *Flueggea neowawraea*, *Gouania meyenii*, *Hedyotis cookiana*, *Hedyotis st.-johnii*, *Hesperomannia lydgatei*, *Hibiscadelphus woodii*, *Hibiscus clayi*, *Hibiscus waimeae* ssp. *hannerae*, *Ischaemum byrone*, *Isodendron laurifolium*, *Isodendron longifolium*, *Kokia kauaiensis*, *Labordia lydgatei*, *Labordia tinifolia* var. *wahiawaensis*, *Lipochaeta fauriei*, *Lipochaeta micrantha*, *Lipochaeta waimeaensis*, *Lobelia niihauensis*, *Lysimachia filifolia*, *Mariscus pennatifolmis*, *Melicope haupuensis*, *Melicope knudsenii*, *Melicope pallida*, *Munroidendron racemosum*, *Myrsine linearifolia*, *Nothoctrum peltatum*, *Panicum niihauense*, *Peucedanum sandwicense*, *Phyllostegia knudsenii*, *Phyllostegia waimeae*, *Phyllostegia wawrana*, *Plantago princeps*, *Platanthera holochila*, *Poa mannii*, *Poa sandwicensis*, *Poa siphonoglossa*, *Pteralyxia kauaiensis*, *Remya kauaiensis*, *Remya montgomeryi*, *Schiedea apokremnos*, *Schiedea helleri*,

*Schiedea kauaiensis*, *Schiedea membranacea*, *Schiedea nuttallii*, *Schiedea spergulina* var. *leiopoda*, *Schiedea spergulina* var. *spergulina*, *Schiedea stellarioides*, *Sesbania tomentosa*, *Solanum sandwicense*, *Spermolepis hawaiiensis*, *Stenogyne campanulata*, *Viola helenae*, *Viola kauaiensis* var. *wahiawaensis*, *Wilkesia hobdyi*, *Xylosma crenatum*, and *Zanthoxylum hawaiiense* to read as follows.

b. Under the table's heading FERNS AND ALLIES, by revising the entries for *Adenophorus periens*, *Ctenitis squamigera*, *Diellia erecta*, *Diellia pallida*, and *Diplazium molokaiense*, removing the entry for *Lycopodium* (= *Phlegmariurus*) *nutans*, and adding an entry for *Phlegmariurus nutans* to read as set forth below.

**§ 17.12 Endangered and threatened plants.**

\* \* \* \* \*  
(h) \* \* \*

Species		Historic range	Family	Status	When listed	Critical habitat	Special rules
Scientific name	Common name						
FLOWERING PLANTS							
* <i>Alectryon macrococcus</i> .	* Mahoe .....	* U.S.A. (HI) .....	* Sapindaceae	* E	* 467	* 17.99(a)(1)	* NA
* <i>Alsinidendron lychnoides</i> .	* Kuawawaenohu .....	* U.S.A. (HI) .....	* Caryophyllaceae	* E	* 590	* 17.99(a)(1)	* NA
* <i>Alsinidendron viscosum</i> .	* None .....	* U.S.A. (HI) .....	* Caryophyllaceae	* E	* 590	* 17.99(a)(1)	* NA
* <i>Bonamia menziesii</i> ...	* None .....	* U.S.A. (HI) .....	* Convolvulaceae	* E	* 559	* 17.99(a)(1)	* NA
* <i>Brighamia insignis</i> ....	* Olulu .....	* U.S.A. (HI) .....	* Campanulaceae	* E	* 530	* 17.99(a)(1) and (a)(2)	* NA
* <i>Centaurium sebaeoides</i> .	* Awiwi .....	* U.S.A. (HI) .....	* Gentianaceae	* E	* 448	* 17.99(a)(1)	* NA
* <i>Chamaesyce halemanui</i> .	* None .....	* U.S.A. (HI) .....	* Euphorbiaceae	* E	* 464	* 17.99(a)(1)	* NA
* <i>Cyanea asarifolia</i> .....	* Haha .....	* U.S.A. (HI) .....	* Campanulaceae	* E	* 530	* 17.99(a)(1)	* NA
* <i>Cyanea recta</i> .....	* Haha .....	* U.S.A (HI) .....	* Campanulaceae	* T	* 590	* 17.99(a)(1)	* NA
* <i>Cyanea remyi</i> .....	* Haha .....	* U.S.A (HI) .....	* Campanulaceae	* E	* 590	* 17.99(a)(1)	* NA
* <i>Cyanea undulata</i> .....	* None .....	* U.S.A. (HI) .....	* Campanulaceae	* E	* 436	* 17.99(a)(1)	* NA

Species		Historic range	Family	Status	When listed	Critical habitat	Special rules
Scientific name	Common name						
<i>Cyperus trachysanthos.</i>	Puukaa	U.S.A. (HI)	Cyperaceae	E	592	17.99(a)(1)	NA
<i>Cyrtandra cyaneoides</i>	Mapele	U.S.A. (HI)	Gesneriaceae	E	590	17.99(a)(1)	NA
<i>Cyrtandra limahuliensis.</i>	Haiwale	U.S.A. (HI)	Gesneriaceae	T	530	17.99(a)(1)	NA
<i>Delissea rhytidosperma.</i>	None	U.S.A. (HI)	Campanulaceae	E	530	17.99(a)(1)	NA
<i>Delissea rivularis</i>	Oha	U.S.A. (HI)	Campanulaceae	E	590	17.99(a)(1)	NA
<i>Delissea undulata</i>	None	U.S.A. (HI)	Campanulaceae	E	593	17.99(a)(1)	NA
<i>Dubautia latifolia</i>	Naenae	U.S.A. (HI)	Asteraceae	E	464	17.99(a)(1)	NA
<i>Dubautia pauciflorula</i>	Naenae	U.S.A. (HI)	Asteraceae	E	436	17.99(a)(1)	NA
<i>Euphorbia haeleeeleana.</i>	Akoko	U.S.A. (HI)	Euphorbiaceae	E	592	17.99(a)(1)	NA
<i>Exocarpos luteolus</i>	Heau	U.S.A. (HI)	Santalaceae	E	530	17.99(a)(1)	NA
<i>Flueggea neowawraea.</i>	Mehamehame	U.S.A. (HI)	Euphorbiaceae	E	559	17.99(a)(1)	NA
<i>Gouania meyenii</i>	None	U.S.A. (HI)	Rhamnaceae	E	448	17.99(a)(1)	NA
<i>Hedyotis cookiana</i>	Awijiwi	U.S.A. (HI)	Rubiaceae	E	530	17.99(a)(1)	NA
<i>Hedyotis st.-johnii</i>	Na Pali beach hedyotis.	U.S.A. (HI)	Rubiaceae	E	441	17.99(a)(1)	NA
<i>Hesperomannia lydgatei.</i>	None	U.S.A. (HI)	Asteraceae	E	436	17.99(a)(1)	NA
<i>Hibiscadelphus woodii.</i>	Hau kuahiwi	U.S.A. (HI)	Malvaceae	E	590	17.99(a)(1)	NA
<i>Hibiscus clayi</i>	Clay's hibiscus	U.S.A. (HI)	Malvaceae	E	530	17.99(a)(1)	NA
<i>Hibiscus waimeae</i> ssp. <i>hanneriae.</i>	Kokio keokeo	U.S.A. (HI)	Malvaceae	E	590	17.99(a)(1)	NA
<i>Ischaemum byrone</i>	Hilo ischaemum	U.S.A. (HI)	Poaceae	E	532	17.99(a)(1)	NA
<i>Isodendron laurifolium.</i>	Aupaka	U.S.A. (HI)	Violaceae	E	592	17.99(a)(1)	NA
<i>Isodendron longifolium.</i>	Aupaka	U.S.A. (HI)	Violaceae	T	592	17.99(a)(1)	NA
<i>Kokia kauaiensis</i>	Kokio	U.S.A. (HI)	Malvaceae	E	590	17.99(a)(1)	NA
<i>Labordia lydgatei</i>	Kamakahala	U.S.A. (HI)	Loganiaceae	E	436	17.99(a)(1)	NA



Species		Historic range	Family	Status	When listed	Critical habitat	Special rules
Scientific name	Common name						
<i>Labordia tinifolia</i> var. <i>wahiawaensis</i> .	Kamakahala .....	U.S.A. (HI) .....	Loganiaceae	E	590	17.99(a)(1)	NA
<i>Lipochaeta fauriei</i> .....	Nehe .....	U.S.A. (HI) .....	Asteraceae	E	530	17.99(a)(1)	NA
<i>Lipochaeta micrantha</i>	Nehe .....	U.S.A. (HI) .....	Asteraceae	E	530	17.99(a)(1)	NA
<i>Lipochaeta waimeensis</i> .	Nehe .....	U.S.A. (HI) .....	Asteraceae	E	530	17.99(a)(1)	NA
<i>Lobelia niihauensis</i> ...	None .....	U.S.A. (HI) .....	Campanulaceae	E	448	17.99(a)(1)	NA
<i>Lysimachia filifolia</i> ....	None .....	U.S.A. (HI) .....	Primulaceae	E	530	17.99(a)(1)	NA
<i>Mariscus pennatiformis</i> .	None .....	U.S.A. (HI) .....	Cyperaceae	E	559	17.99(a)(1)	NA
<i>Melicope haupuensis</i>	Alani .....	U.S.A. (HI) .....	Rutaceae	E	530	17.99(a)(1)	NA
<i>Melicope knudsenii</i> ...	Alani .....	U.S.A. (HI) .....	Rutaceae	E	530	17.99(a)(1)	NA
<i>Melicope pallida</i> .....	Alani .....	U.S.A. (HI) .....	Rutaceae	E	530	17.99(a)(1)	NA
<i>Munroidendron racemosum</i> .	None .....	U.S.A. (HI) .....	Araliaceae	E	530	17.99(a)(1)	NA
<i>Myrsine linearifolia</i> ....	Kolea .....	U.S.A. (HI) .....	Myrsinaceae	T	590	17.99(a)(1)	NA
<i>Nothoctrum peltatum</i> .	Aiea .....	U.S.A. (HI) .....	Solanaceae	E	530	17.99(a)(1)	NA
<i>Panicum niihauense</i>	Lau ehū .....	U.S.A. (HI) .....	Poaceae	E	592	17.99(a)(1)	NA
<i>Peucedanum sandwicense</i> .	Makou .....	U.S.A. (HI) .....	Apiaceae	T	530	17.99(a)(1)	NA
<i>Phyllostegia knudsenii</i> .	None .....	U.S.A. (HI) .....	Lamiaceae	E	590	17.99(a)(1)	NA
<i>Phyllostegia waimeae</i>	None .....	U.S.A. (HI) .....	Lamiaceae	E	530	17.99(a)(1)	NA
<i>Phyllostegia wawrana</i>	None .....	U.S.A. (HI) .....	Lamiaceae	E	590	17.99(a)(1)	NA
<i>Plantago princeps</i> .....	Laukahi kuahiwi .....	U.S.A. (HI) .....	Plantaginaceae	E	559	17.99(a)(1)	NA
<i>Platanthera holochila</i>	None .....	U.S.A. (HI) .....	Orchidaceae	E	592	17.99(a)(1)	NA
<i>Poa mannii</i> .....	Mann's bluegrass .....	U.S.A. (HI) .....	Poaceae	E	558	17.99(a)(1)	NA
<i>Poa sandwicensis</i> .....	Hawaiian bluegrass ..	U.S.A. (HI) .....	Poaceae	E	464	17.99(a)(1)	NA
<i>Poa siphonoglossa</i> ...	None .....	U.S.A. (HI) .....	Poaceae	E	464	17.99(a)(1)	NA

Species		Historic range	Family	Status	When listed	Critical habitat	Special rules
Scientific name	Common name						
<i>Pteralyxia kauaiensis</i>	Kaulu	U.S.A. (HI)	Apocynaceae	E	530	17.99(a)(1)	NA
<i>Remya kauaiensis</i>	None	U.S.A. (HI)	Asteraceae	E	413	17.99(a)(1)	NA
<i>Remya montgomeryi</i>	None	U.S.A. (HI)	Asteraceae	E	413	17.99(a)(1)	NA
<i>Schiedea apokremnos</i>	Maolioli	U.S.A. (HI)	Caryophyllaceae	E	441	17.99(a)(1)	NA
<i>Schiedea helleri</i>	None	U.S.A. (HI)	Caryophyllaceae	E	590	17.99(a)(1)	NA
<i>Schiedea kauaiensis</i>	None	U.S.A. (HI)	Caryophyllaceae	E	592	17.99(a)(1)	NA
<i>Schiedea membranacea</i>	None	U.S.A. (HI)	Caryophyllaceae	E	590	17.99(a)(1)	NA
<i>Schiedea nuttallii</i>	None	U.S.A. (HI)	Caryophyllaceae	E	592	17.99(a)(1)	NA
<i>Schiedea spergulina</i> var. <i>leiopoda</i>	None	U.S.A. (HI)	Caryophyllaceae	E	530	17.99(a)(1)	NA
<i>Schiedea spergulina</i> var. <i>spergulina</i>	None	U.S.A. (HI)	Caryophyllaceae	E	530	17.99(a)(1)	NA
<i>Schiedea stellarioides</i>	Laulihilihi (=Maolioli)	U.S.A. (HI)	Caryophyllaceae	E	590	17.99(a)(1)	NA
<i>Sesbania tomentosa</i>	Ohai	U.S.A. (HI)	Fabaceae	E	559	17.99(a)(1)	NA
<i>Solanum sandwicense</i>	Aiakeakua, popolo	U.S.A. (HI)	Solanaceae	E	530	17.99(a)(1)	NA
<i>Spermolepis hawaiiensis</i>	None	U.S.A. (HI)	Apiaceae	E	559	17.99(a)(1)	NA
<i>Stenogyne campanulata</i>	None	U.S.A. (HI)	Lamiaceae	E	464	17.99(a)(1)	NA
<i>Viola helenae</i>	None	U.S.A. (HI)	Violaceae	E	436	17.99(a)(1)	NA
<i>Viola kauaiensis</i> var. <i>wahiawaensis</i>	Nani waialeale	U.S.A. (HI)	Violaceae	E	590	17.99(a)(1)	NA
<i>Wilkesia hobyi</i>	Dwarfiliau	U.S.A. (HI)	Asteraceae	E	473	17.99(a)(1)	NA
<i>Xylosma crenatum</i>	None	U.S.A. (HI)	Flacourtiaceae	E	464	17.99(a)(1)	NA
<i>Zanthoxylum hawaiiense</i>	Ae	U.S.A. (HI)	Rutaceae	E	532	17.99(a)(1)	NA

Species		Historic range	Family	Status	When listed	Critical habitat	Special rules
Scientific name	Common name						
* * * * *							
FERNS AND ALLIES							
<i>Adenophorus periens</i>	Pendent kihi fern .....	U.S.A. (HI) .....	Grammitidaceae	E	559	17.99(a)(1)	NA
* * * * *							
<i>Ctenitis squamigera</i> ..	Pauoa .....	U.S.A. (HI) .....	Aspleniaceae	E	553	17.99(a)(1)	NA
* * * * *							
<i>Diellia erecta</i> .....	Asplenium-leaved diellia.	U.S.A. (HI) .....	Aspleniaceae	E	559	17.99(a)(1)	NA
* * * * *							
<i>Diellia pallida</i> .....	None .....	U.S.A. (HI) .....	Aspleniaceae	E	530	17.99(a)(1)	NA
* * * * *							
<i>Diplazium molokaiense</i> .	None .....	U.S.A. (HI) .....	Aspleniaceae	E	553	17.99(a)(1)	NA
* * * * *							
<i>Phlegmariurus nutans</i>	Wawaeiole .....	U.S.A. (HI) .....	Lycopodiaceae	E	536	17.99(a)(1)	NA
* * * * *							

3. Add a new § 17.99 to read as follows:

**§ 17.99 Critical habitat; plants on the islands of Kauai and Niihau, HI.**

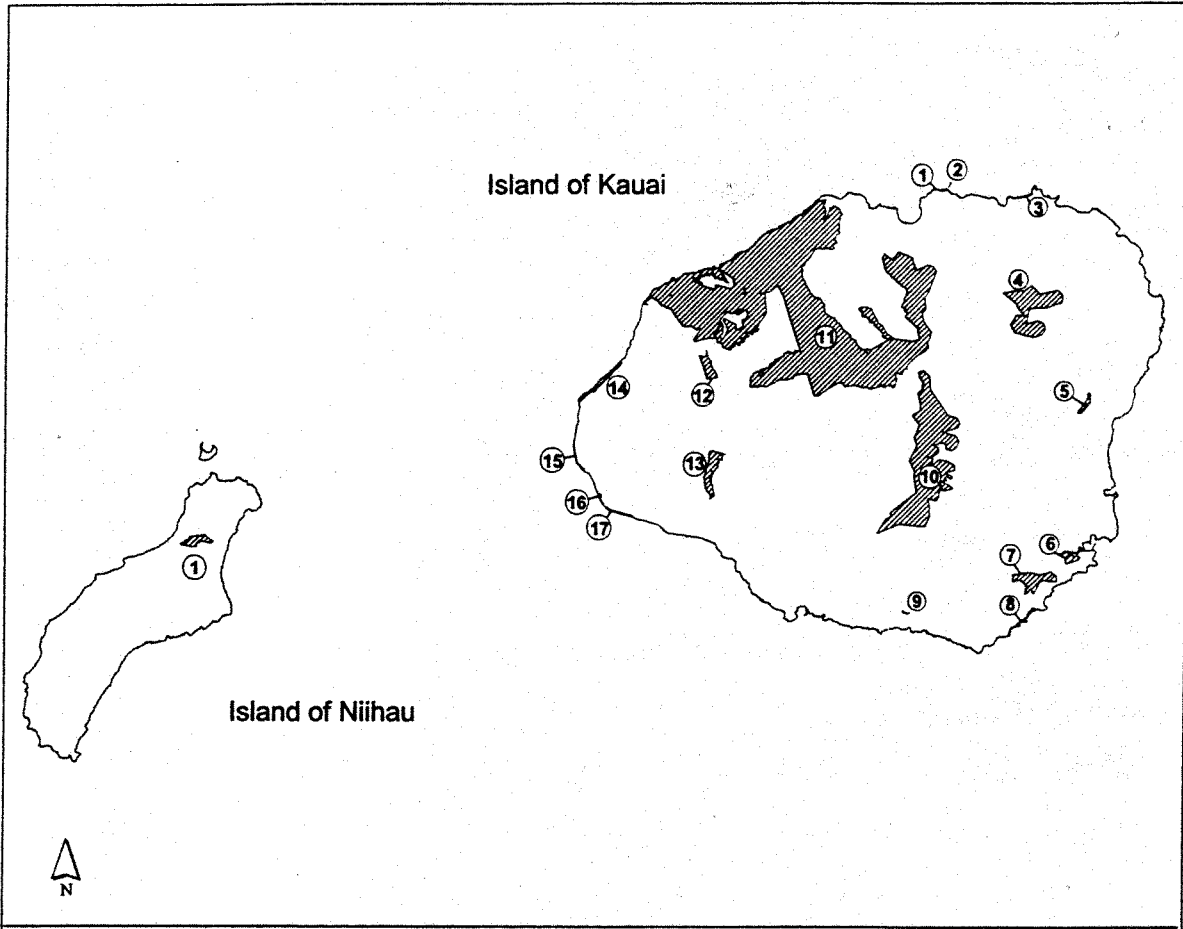
(a) *Maps and critical habitat unit descriptions.* The following paragraphs contain the legal descriptions of the critical habitat units designated for the Hawaiian Islands of Kauai and Niihau. Existing manmade features and structures within the boundaries of the mapped areas, such as buildings; roads; aqueducts and other water system features, including but not limited to pumping stations, irrigation ditches, pipelines, siphons, tunnels, water tanks,

gaging stations, intakes, reservoirs, diversions, flumes, and wells; existing trails; campgrounds and their immediate surrounding landscaped area; scenic lookouts; remote helicopter landing sites; existing fences; telecommunications equipment towers and associated structures and equipment; electrical power transmission lines and distribution, and communication facilities and regularly maintained associated rights-of-way and access ways; radars, telemetry antennas; missile launch sites; arboreta and gardens; heiau (indigenous places of worship or shrines), and other

archaeological sites; airports; other paved areas; and lawns and other rural residential landscaped areas do not contain one or more of the primary constituent elements described for each species in paragraph (b) of this section and therefore are not included in the critical habitat designations.

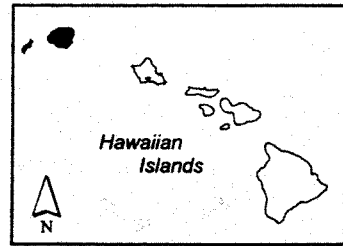
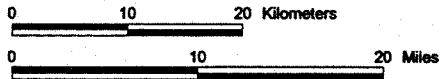
(1) *Kauai.* Critical habitat units are described below. Coordinates in UTM Zone 4 with units in meters using North American Datum of 1983 (NAD83). The following map shows the general locations of the 219 critical habitat units designated on the island of Kauai.

(i) **Note:** Map 1—Index map follows:



**Map 1**  
**Kauai and Niihau Final Critical Habitat - Island Index Map**

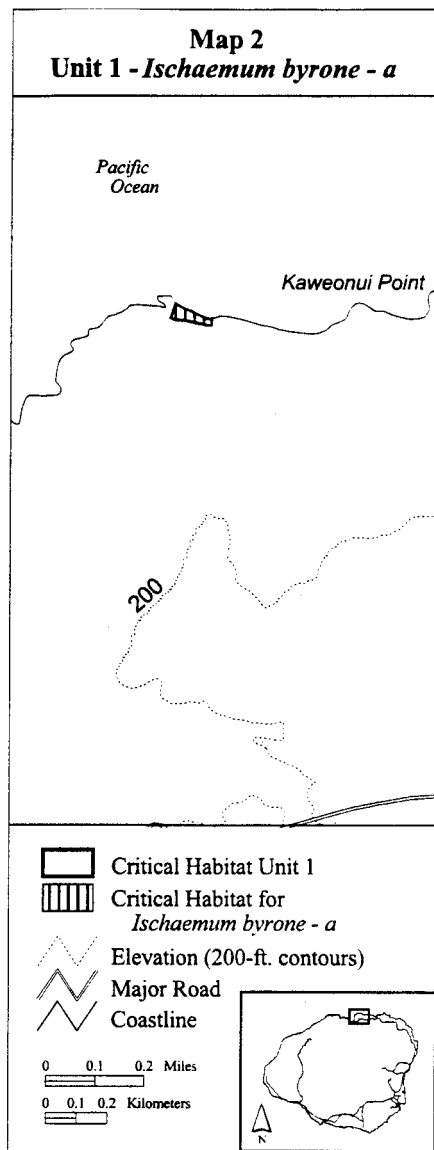
 Final Kauai and Niihau Critical Habitat Unit



(ii) Kauai 1—*Ischaemum byrone*—a (1 ha; .4 ac)

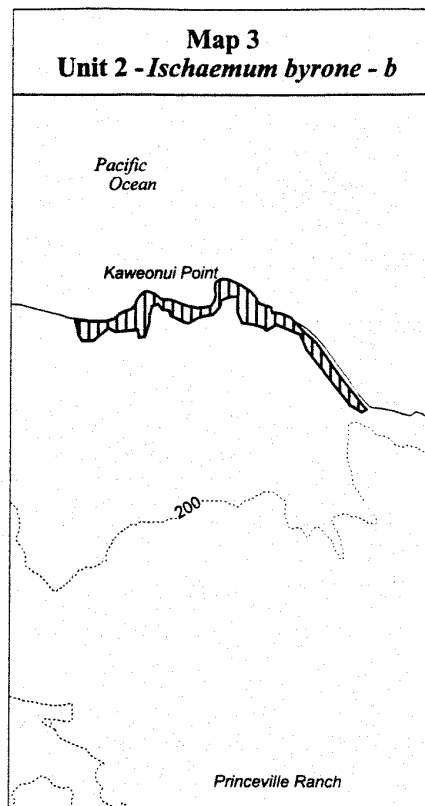
(A) Unit consists of the following 9 boundary points: coastline; 449995, 2458285; 449999, 2458293; 450118, 2458243; 450116, 2458221; 450104, 2458221; 450032, 2458238; 449997, 2458240; 449981, 2458248; 449991, 2458273; coastline.

(B) Note: Map 2 follows:



2458185; 450916, 2458191; 450905, 2458216; 450900, 2458226; 450901, 2458242; 450902, 2458273; 450902, 2458273; 450902, 2458278; 450871, 2458277; 450848, 2458265; 450843, 2458242; 450818, 2458217; 450778, 2458211; 450737, 2458190; 450725, 2458194; 450679, 2458215; 450677, 2458215; 450673, 2458233; 450650, 2458236; 450636, 2458255; 450615, 2458247; 450612, 2458223; 450607, 2458222; 450607, 2458191; 450606, 2458185; 450592, 2458144; 450574, 2458143; 450568, 2458168; 450568, 2458168; 450568, 450495, 2458159; 450472, 2458173; 450420, 2458129; 450420, 2458129; 450383, 2458129; 450372, 2458147; 450366, 2458173; 450361, 2458197; 450360, 2458202; 450361, 2458202; 451076, 2458209; coastline.

(B) Note: Map 3 follows:



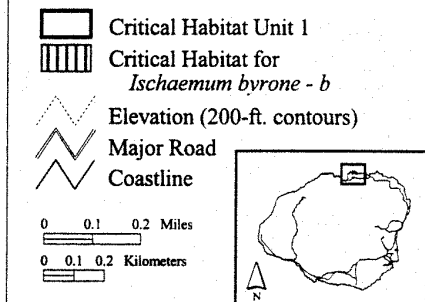
(iv) Kauai 3—*Ischaemum byrone*—c (7 ha; 17 ac)

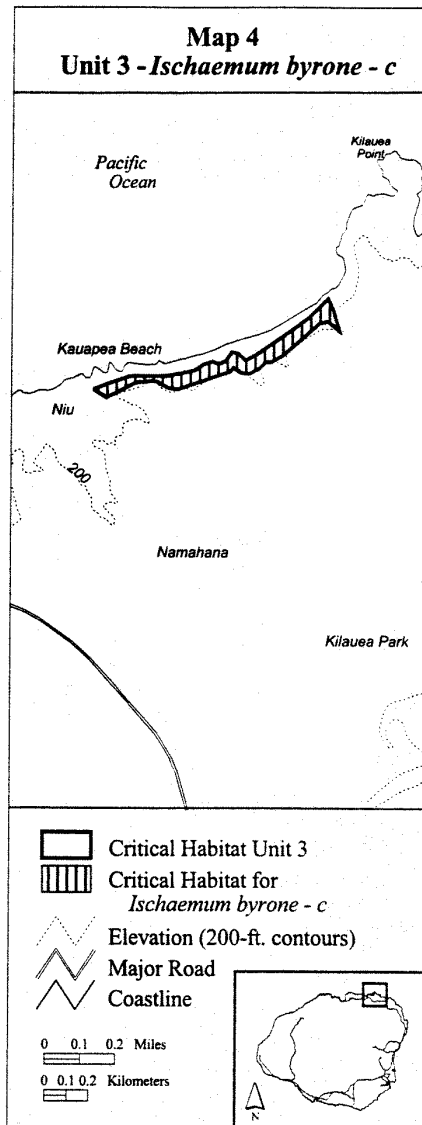
(A) Unit consists of the following 51 boundary points: Start at 457168, 2457531; 457235, 2457554; 457342, 2457591; 457377, 2457591; 457421, 2457591; 457469, 2457591; 457503, 2457591; 457556, 2457600; 457625, 2457613; 457631, 2457617; 457674, 2457645; 457713, 2457657; 457739, 2457648; 457747, 2457650; 457754, 2457649; 457758, 2457653; 457769, 2457656; 457794, 2457692; 457801, 2457700; 457830, 2457691; 457865, 2457661; 457891, 2457678; 457913, 2457687; 457961, 2457722; 458074, 2457800; 458157, 2457861; 458240, 2457943; 458266, 2457887; 458291, 2457796; 458241, 2457839; 458199, 2457830; 458122, 2457761; 458032, 2457682; 457981, 2457654; 457958, 2457654; 457926, 2457624; 457883, 2457600; 457851, 2457604; 457835, 2457612; 457808, 2457629; 457794, 2457610; 457555, 2457530; 457515, 2457534; 457459, 2457567; 457441, 2457569; 457364, 2457561; 457364, 2457561; 457364, 2457561; 457329, 2457544; 457327, 2457542; 457230, 2457492; return to starting point.

(B) Note: Map 4 follows:

(iii) Kauai 2—*Ischaemum byrone*—b (6 ha; 14 ac)

(A) Unit consists of the following 59 boundary points: coastline; 451087, 2458201; 451120, 2458166; 451162, 2458127; 451246, 2458013; 451331, 2457904; 451317, 2457895; 451278, 2457919; 451277, 2457919; 451276, 2457920; 451190, 2458029; 451190, 2458032; 451175, 2458047; 451132, 2458101; 451110, 2458153; 451031, 2458185; 450999, 2458165; 450996, 2458166; 450987, 2458176; 450954,





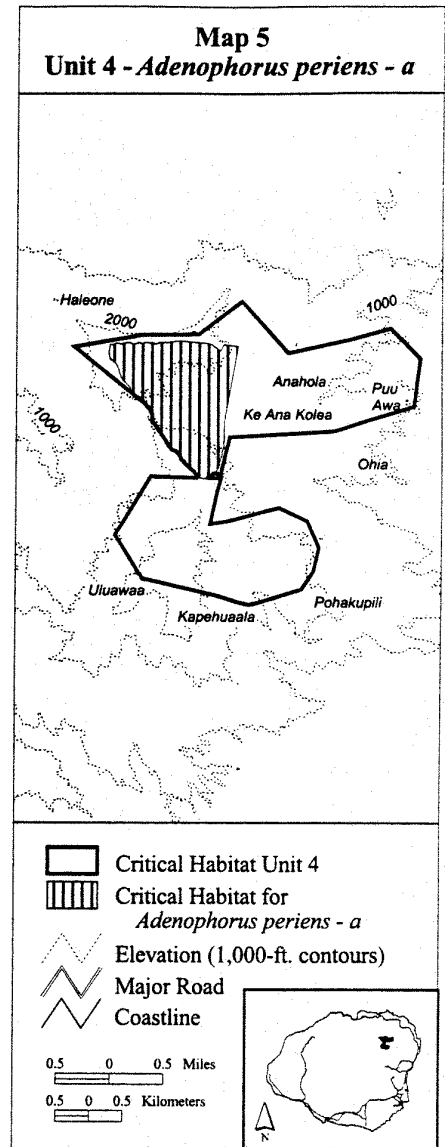
(v) Kauai 4—*Adenophorus periens*—a (237 ha; 585 ac)

(A) Unit consists of the following 183 boundary points: Start at 457883, 2449413; 457917, 2449393; 457954, 2449369; 458004, 2449331; 458025, 2449313; 458037, 2449307; 458058, 2449301; 458098, 2449392; 458308, 2449371; 458105, 2448250; 458095, 2447849; 458085, 2447839; 458077, 2447822; 458073, 2447793; 458073, 2447739; 458057, 2447694; 458046, 2447671; 458033, 2447617; 458027, 2447575; 458026, 2447556; 458023, 2447548; 458009, 2447525; 457998, 2447517; 457979, 2447491; 457946, 2447469; 457927, 2447446; 457899, 2447424; 457864, 2447408; 457850, 2447402; 457830, 2447399; 457801, 2447389; 457689, 2447425; 457690, 2447445; 457684, 2447466; 457667, 2447490; 457653, 2447503; 457639, 2447513; 457604, 2447540; 457587, 2447559; 457545, 2447595; 457538, 2447604; 457528, 2447615; 457505,

2447643; 457502, 2447650; 457473, 2447678; 457457, 2447706; 457446, 2447731; 457399, 2447802; 457389, 2447810; 457328, 2447832; 457310, 2447844; 457297, 2447860; 457274, 2447898; 457234, 2447967; 457193, 2448027; 457148, 2448093; 457124, 2448122; 457112, 2448143; 457089, 2448187; 457076, 2448209; 457048, 2448243; 457032, 2448261; 457029, 2448269; 457028, 2448278; 457031, 2448299; 457032, 2448323; 457031, 2448342; 457028, 2448361; 457016, 2448395; 457005, 2448416; 457002, 2448438; 456998, 2448448; 456991, 2448459; 456973, 2448474; 456957, 2448488; 456943, 2448512; 456930, 2448544; 456916, 2448568; 456896, 2448595; 456883, 2448609; 456870, 2448619; 456856, 2448627; 456832, 2448632; 456801, 2448644; 456771, 2448662; 456748, 2448682; 456733, 2448698; 456713, 2448726; 456697, 2448759; 456679, 2448787; 456671, 2448799; 456652, 2448821; 456635, 2448836; 456615, 2448849; 456596, 2448859; 456583, 2448874; 456572, 2448891; 456563, 2448911; 456551, 2448951; 456541, 2448985; 456535, 2449004; 456530, 2449029; 456526, 2449045; 456516, 2449067; 456504, 2449086; 456491, 2449106; 456476, 2449128; 456462, 2449139; 456446, 2449150; 456435, 2449153; 456419, 2449170; 456404, 2449186; 456395, 2449205; 456387, 2449236; 456386, 2449264; 456390, 2449313; 456395, 2449355; 456394, 2449367; 456394, 2449381; 456397, 2449394; 456401, 2449399; 456407, 2449399; 456420, 2449397; 456439, 2449398; 456457, 2449404; 456483, 2449414; 456501, 2449416; 456513, 2449416; 456533, 2449412; 456569, 2449406; 456586, 2449405; 456603, 2449410; 456620, 2449418; 456633, 2449423; 456647, 2449426; 456662, 2449428; 456681, 2449425; 456706, 2449417; 456733, 2449409; 456752, 2449403; 456769, 2449404; 456787, 2449409; 456807, 2449421; 456818, 2449430; 456826, 2449432; 456836, 2449428; 456852, 2449419; 456862, 2449411; 456869, 2449407; 456878, 2449407; 456889, 2449412; 456910, 2449422; 456924, 2449429; 456941, 2449429; 456969, 2449426; 456991, 2449421; 457000, 2449421; 457034, 2449425; 457042, 2449425; 457049, 2449422; 457064, 2449414; 457073, 2449409; 457083, 2449408; 457097, 2449407; 457107, 2449413; 457123, 2449423; 457132, 2449429; 457141, 2449431; 457168, 2449428; 457205, 2449431; 457229, 2449432; 457255, 2449429; 457276, 2449429; 457289, 2449431; 457300, 2449437; 457307, 2449440; 457314, 2449440; 457325, 2449437; 457352,

2449440; 457363, 2449443; 457395, 2449451; 457417, 2449451; 457451, 2449456; return to starting point.

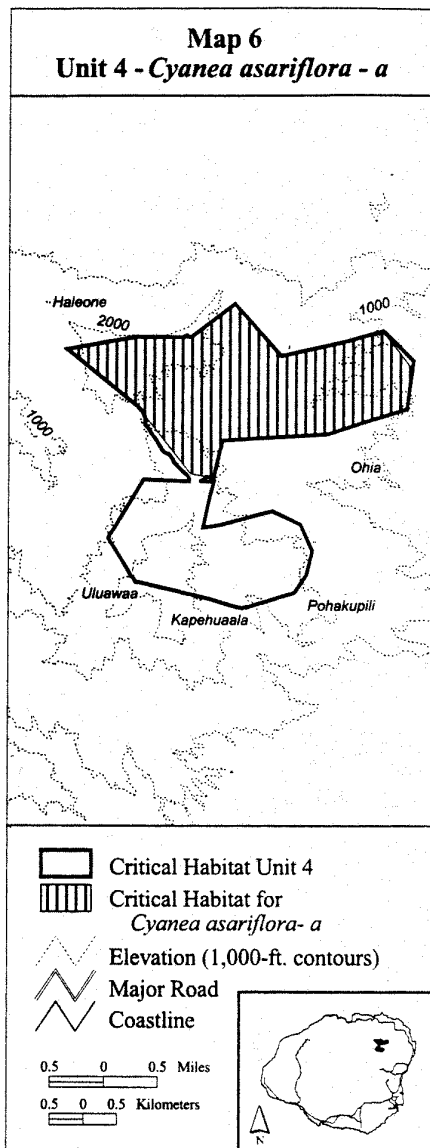
(B) Note: Map 5 follows:



(vi) Kauai 4—*Cyanea asarifolia*—a (654 ha; 1,616 ac)

(A) Unit consists of the following 18 boundary points: Start at 455868, 2449362; 456901, 2449549; 457715, 2449548; 458372, 2450048; 459061, 2449266; 460595, 2449609; 460596, 2449609; 461002, 2449077; 460947, 2448554; 460939, 2448483; 460904, 2448472; 460823, 2448447; 460270, 2448273; 459750, 2448109; 458184, 2448016; 458059, 2447453; 457715, 2447516; 456932, 2448517; return to starting point.

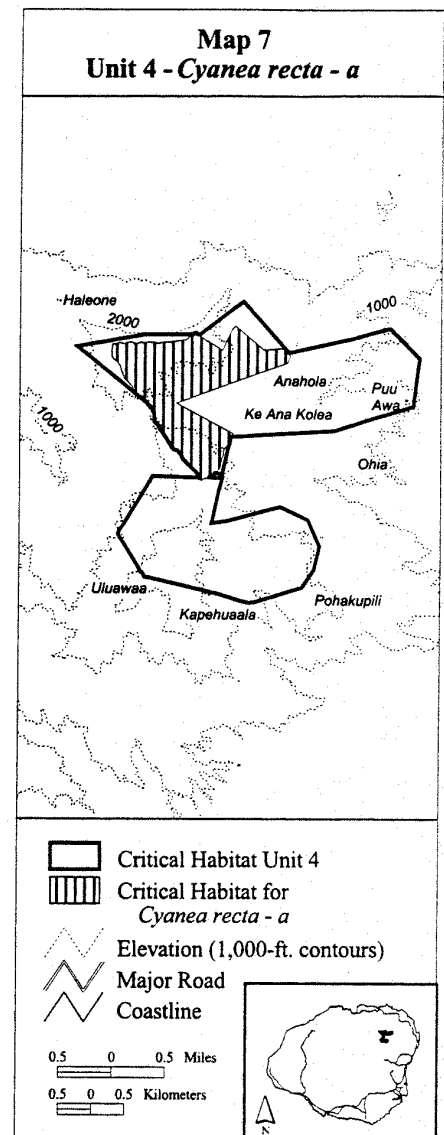
(B) Note: Map 6 follows:



2447490; 457653, 2447503; 457639, 2447513; 457604, 2447540; 457587, 2447559; 457545, 2447595; 457538, 2447604; 457528, 2447615; 457505, 2447643; 457502, 2447650; 457473, 2447678; 457457, 2447706; 457446, 2447731; 457399, 2447802; 457389, 2447810; 457328, 2447832; 457310, 2447844; 457297, 2447860; 457274, 2447898; 457234, 2447967; 457193, 2448027; 457148, 2448093; 457124, 2448122; 457112, 2448143; 457089, 2448187; 457076, 2448209; 457048, 2448243; 457032, 2448261; 457029, 2448269; 457028, 2448278; 457031, 2448299; 457032, 2448323; 457031, 2448342; 457028, 2448361; 457016, 2448395; 457005, 2448416; 457002, 2448438; 456998, 2448448; 456991, 2448459; 456973, 2448474; 456957, 2448488; 456943, 2448512; 456930, 2448544; 456916, 2448568; 456896, 2448595; 456883, 2448609; 456870, 2448619; 456856, 2448627; 456832, 2448632; 456801, 2448644; 456771, 2448662; 456748, 2448682; 456733, 2448698; 456713, 2448726; 456697, 2448759; 456679, 2448787; 456671, 2448799; 456652, 2448821; 456635, 2448836; 456615, 2448849; 456596, 2448859; 456583, 2448874; 456572, 2448891; 456563, 2448911; 456551, 2448951; 456541, 2448985; 456535, 2449004; 456530, 2449029; 456526, 2449045; 456516, 2449067; 456504, 2449086; 456491, 2449106; 456476, 2449128; 456462, 2449139; 456446, 2449150; 456435, 2449153; 456419, 2449170; 456404, 2449186; 456395, 2449205; 456387, 2449236; 456386, 2449264; 456390, 2449313; 456395, 2449355; 456394, 2449367; 456394, 2449381; 456397, 2449394; 456401, 2449399; 456407, 2449399; 456420, 2449397; 456439, 2449398; 456457, 2449404; 456483, 2449414; 456501, 2449416; 456513, 2449416; 456533, 2449412; 456569, 2449406; 456586, 2449405; 456603, 2449410; 456620, 2449418; 456633, 2449423; 456647, 2449426; 456662, 2449428; 456681, 2449425; 456706, 2449417; 456733, 2449409; 456752, 2449403; 456769, 2449404; 456787, 2449409; 456807, 2449421; 456818, 2449430; 456826, 2449432; 456836, 2449428; 456852, 2449419; 456862, 2449411; 456869, 2449407; 456878, 2449407; 456889, 2449412; 456910, 2449422; 456924, 2449429; 456941, 2449429; 456969, 2449426; 456991, 2449421; 457000, 2449421; 457034, 2449425; 457042, 2449425; 457049, 2449422; 457064, 2449414; 457073, 2449409; 457083, 2449408; 457097, 2449407; 457107, 2449413; 457123, 2449423; 457132, 2449429; 457141, 2449431; 457168, 2449428; 457205, 2449431; 457229,

2449432; 457255, 2449429; 457276, 2449429; 457289, 2449431; 457300, 2449437; 457307, 2449440; 457314, 2449440; 457325, 2449437; 457352, 2449440; 457363, 2449443; 457395, 2449451; 457417, 2449451; 457492, 2449461; 457515, 2449471; 457522, 2449475; 457547, 2449505; 457592, 2449538; 457610, 2449548; 457618, 2449556; 457631, 2449564; 457646, 2449571; 457651, 2449568; 457672, 2449547; 457689, 2449529; 457699, 2449522; 457714, 2449515; 457742, 2449506; 457770, 2449483; 457776, 2449475; 457788, 2449467; 457825, 2449449; 457846, 2449433; 457856, 2449429; 457917, 2449393; 457954, 2449369; 458004, 2449331; 458025, 2449313; 458037, 2449307; 458058, 2449301; 458141, 2449491; 458199, 2449615; return to starting point.

(B) Note: Map 7 follows:



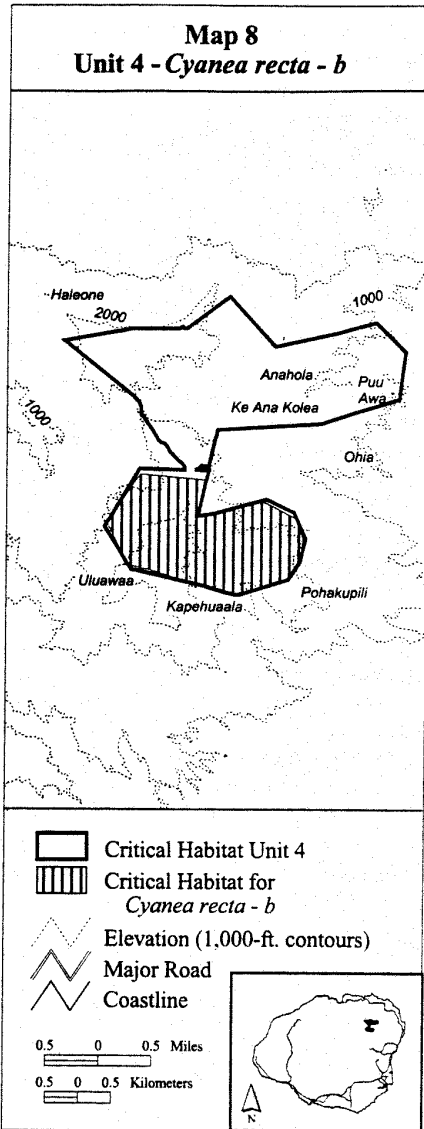
(vii) Kauai 4—*Cyanea recta*—a (252 ha; 622 ac)

(A) Unit consists of the following 217 boundary points: Start at 458254, 2449672; 458681, 2449311; 458976, 2449337; 459083, 2449224; 459041, 2449114; 458385, 2448885; 457368, 2448525; 458223, 2448067; 458204, 2448065; 458165, 2447893; 458096, 2447851; 458085, 2447839; 458077, 2447822; 458073, 2447793; 458073, 2447739; 458057, 2447694; 458046, 2447671; 458033, 2447617; 458027, 2447575; 458026, 2447556; 458023, 2447548; 458009, 2447525; 457998, 2447517; 457979, 2447491; 457946, 2447469; 457927, 2447446; 457899, 2447424; 457864, 2447408; 457850, 2447402; 457830, 2447399; 457797, 2447387; 457757, 2447362; 457741, 2447354; 457739, 2447359; 457725, 2447369; 457716, 2447375; 457694, 2447401; 457689, 2447425; 457690, 2447445; 457684, 2447466; 457667,

(viii) Kauai 4—*Cyanea recta*—b (351 ha; 868 ac)

(A) Unit consists of the following 15 boundary points: Start at 458861, 2446942; 459372, 2446687; 459490, 2446382; 459454, 2446075; 459242, 2445757; 458486, 2445521; 457390, 2445835; 457139, 2445925; 457088, 2445921; 456838, 2445992; 456525, 2446628; 457027, 2447344; 458020, 2447254; 457900, 2446720; 458214, 2446760; return to starting point.

(B) Note: Map 8 follows:

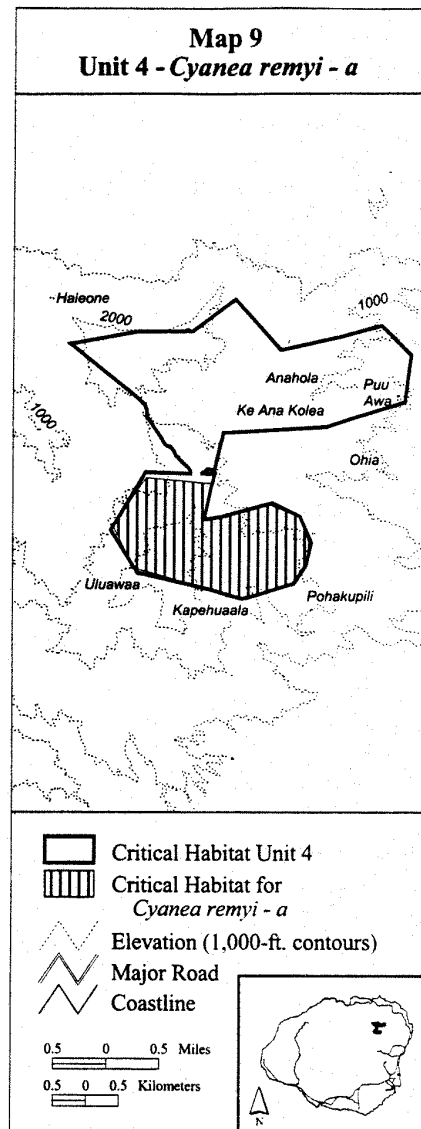


(ix) Kauai 4—*Cyanea remyi*—a (353 ha; 873 ac)

(A) Unit consists of the following 14 boundary points: Start at 457088, 2445921; 456838, 2445992; 456525, 2446628; 457027, 2447344; 458020, 2447254; 457900, 2446720; 458214, 2446760; 458887, 2446950; 459348, 2446748; 459490, 2446382; 459454, 2446075; 459242, 2445757; 458486,

2445521; 457390, 2445835; return to starting point.

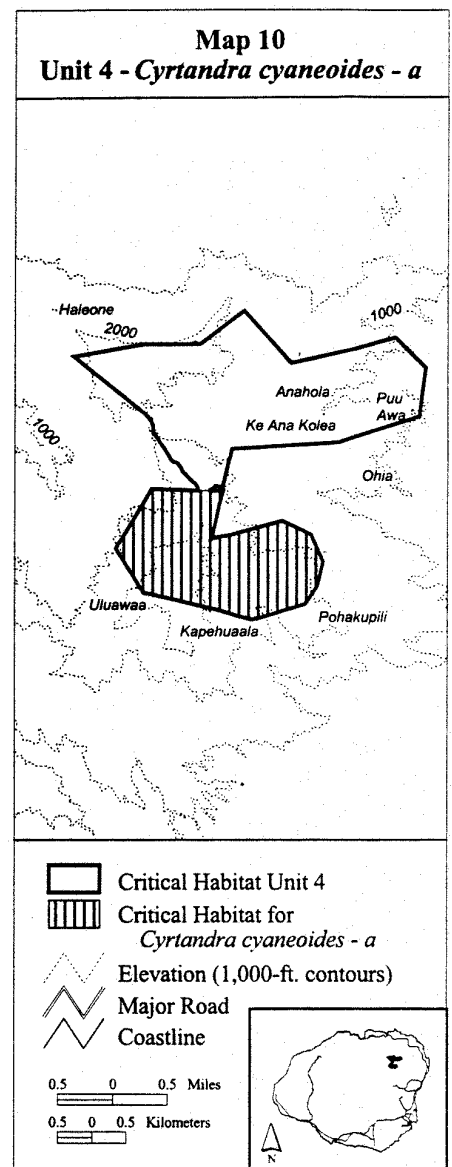
(B) Note: Map 9 follows:



(x) Kauai 4—*Cyrtandra cyaneoides*—a (376 ha; 928 ac)

(A) Unit consists of the following 13 boundary points: Start at 457013, 2447427; 458066, 2447394; 457852, 2446671; 458938, 2446966; 459350, 2446768; 459531, 2446374; 459449, 2446012; 459268, 2445749; 458544, 2445536; 457395, 2445800; 456955, 2445902; 456898, 2445915; 456486, 2446556; return to starting point.

(B) Note: Map 10 follows:



(xi) Kauai 4—*Cyrtandra limahuliensis*—a (501 ha; 1,237 ac)

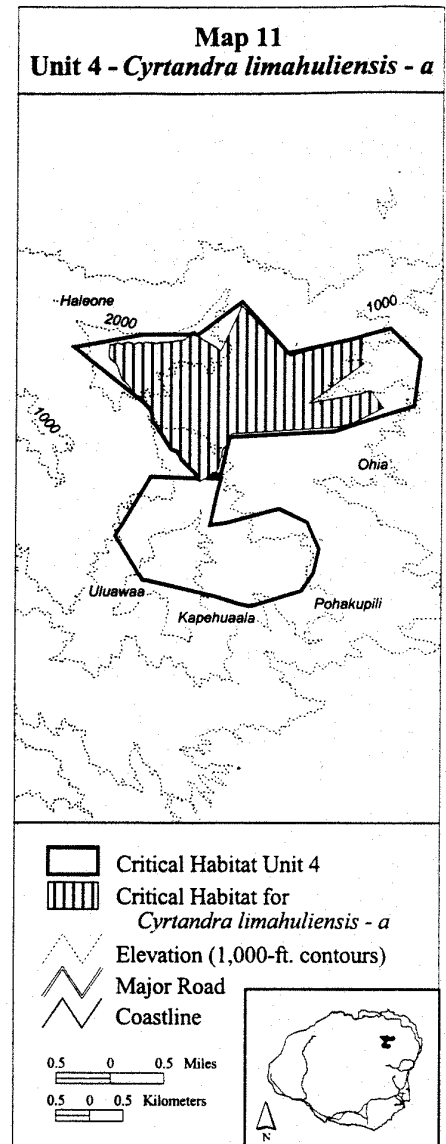
(A) Unit consists of the following 225 boundary points: Start at 460167, 2449523; 460165, 2449520; 460143, 2449148; 460121, 2449133; 460190, 2449113; 459376, 2448529; 460097, 2448660; 460288, 2448720; 460453, 2448490; 460443, 2448485; 460474, 2448455; 460038, 2448238; 459811, 2448172; 458204, 2448065; 458165, 2447893; 458096, 2447851; 458085, 2447839; 458077, 2447822; 458073, 2447793; 458073, 2447739; 458057, 2447694; 458046, 2447671; 458033, 2447617; 458027, 2447575; 458026, 2447556; 458023, 2447548; 458009, 2447525; 457998, 2447517; 457979, 2447491; 457946, 2447469; 457927, 2447446; 457899, 2447424; 457864, 2447408; 457850, 2447402; 457830, 2447399; 457797, 2447387; 457757, 2447362; 457741, 2447354; 457739,



2447359; 457725, 2447369; 457716,  
 2447375; 457694, 2447401; 457689,  
 2447425; 457690, 2447445; 457684,  
 2447466; 457667, 2447490; 457653,  
 2447503; 457639, 2447513; 457604,  
 2447540; 457587, 2447559; 457545,  
 2447595; 457538, 2447604; 457528,  
 2447615; 457505, 2447643; 457502,  
 2447650; 457473, 2447678; 457457,  
 2447706; 457446, 2447731; 457399,  
 2447802; 457389, 2447810; 457328,  
 2447832; 457310, 2447844; 457297,  
 2447860; 457274, 2447898; 457234,  
 2447967; 457193, 2448027; 457148,  
 2448093; 457124, 2448122; 457112,  
 2448143; 457089, 2448187; 457076,  
 2448209; 457048, 2448243; 457032,  
 2448261; 457029, 2448269; 457028,  
 2448278; 457031, 2448299; 457032,  
 2448323; 457031, 2448342; 457028,  
 2448361; 457016, 2448395; 457005,  
 2448416; 457002, 2448438; 456998,  
 2448448; 456991, 2448459; 456973,  
 2448474; 456957, 2448488; 456943,  
 2448512; 456930, 2448544; 456916,  
 2448568; 456896, 2448595; 456883,  
 2448609; 456870, 2448619; 456856,  
 2448627; 456832, 2448632; 456801,  
 2448644; 456771, 2448662; 456748,  
 2448682; 456733, 2448698; 456713,  
 2448726; 456697, 2448759; 456679,  
 2448787; 456671, 2448799; 456652,  
 2448821; 456635, 2448836; 456615,  
 2448849; 456596, 2448859; 456583,  
 2448874; 456572, 2448891; 456563,  
 2448911; 456551, 2448951; 456541,  
 2448985; 456535, 2449004; 456530,  
 2449029; 456526, 2449045; 456516,  
 2449067; 456504, 2449086; 456491,  
 2449106; 456476, 2449128; 456462,  
 2449139; 456446, 2449150; 456435,  
 2449153; 456419, 2449170; 456404,  
 2449186; 456395, 2449205; 456387,  
 2449236; 456386, 2449264; 456390,  
 2449313; 456395, 2449355; 456394,  
 2449367; 456394, 2449381; 456397,  
 2449394; 456401, 2449399; 456407,  
 2449399; 456420, 2449397; 456439,  
 2449398; 456457, 2449404; 456483,  
 2449414; 456501, 2449416; 456513,  
 2449416; 456533, 2449412; 456569,  
 2449406; 456586, 2449405; 456603,  
 2449410; 456620, 2449418; 456633,  
 2449423; 456647, 2449426; 456662,  
 2449428; 456681, 2449425; 456706,  
 2449417; 456733, 2449409; 456752,  
 2449403; 456769, 2449404; 456787,  
 2449409; 456807, 2449421; 456818,  
 2449430; 456826, 2449432; 456836,  
 2449428; 456852, 2449419; 456862,  
 2449411; 456869, 2449407; 456878,  
 2449407; 456889, 2449412; 456910,  
 2449422; 456924, 2449429; 456941,  
 2449429; 456969, 2449426; 456991,  
 2449421; 457000, 2449421; 457034,  
 2449425; 457042, 2449425; 457049,  
 2449422; 457064, 2449414; 457073,  
 2449409; 457083, 2449408; 457097,

2449407; 457107, 2449413; 457123,  
 2449423; 457132, 2449429; 457141,  
 2449431; 457168, 2449428; 457205,  
 2449431; 457229, 2449432; 457255,  
 2449429; 457276, 2449429; 457289,  
 2449431; 457300, 2449437; 457307,  
 2449440; 457314, 2449440; 457325,  
 2449437; 457352, 2449440; 457363,  
 2449443; 457395, 2449451; 457417,  
 2449451; 457492, 2449461; 457515,  
 2449471; 457522, 2449475; 457547,  
 2449505; 457592, 2449538; 457610,  
 2449548; 457618, 2449556; 457631,  
 2449564; 457646, 2449571; 457651,  
 2449568; 457672, 2449547; 457689,  
 2449529; 457699, 2449522; 457714,  
 2449515; 457742, 2449506; 457770,  
 2449483; 457776, 2449475; 457788,  
 2449467; 457825, 2449449; 457846,  
 2449433; 457856, 2449429; 457917,  
 2449393; 457954, 2449369; 458004,  
 2449331; 458025, 2449313; 458037,  
 2449307; 458058, 2449301; 458141,  
 2449491; 458199, 2449615; 458316,  
 2449881; 458363, 2449984; 459083,  
 2449224; return to starting point.

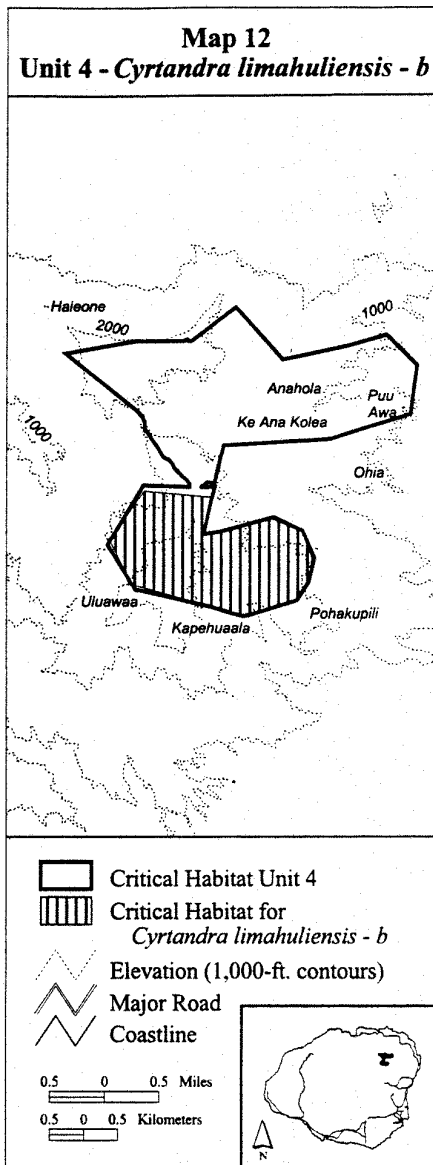
(B) Note: Map 11 follows:



(xii) Kauai 4—*Cyrtandra limahuliensis*—b (353 ha; 873 ac)

(A) Unit consists of the following 14 boundary points: Start at 457088, 2445921; 456838, 2445992; 456525, 2446628; 457027, 2447344; 458020, 2447254; 457900, 2446720; 458214, 2446760; 458887, 2446950; 459348, 2446748; 459490, 2446382; 459454, 2446075; 459242, 2445757; 458486, 2445521; 457390, 2445835; return to starting point.

(B) Note: Map 12 follows:

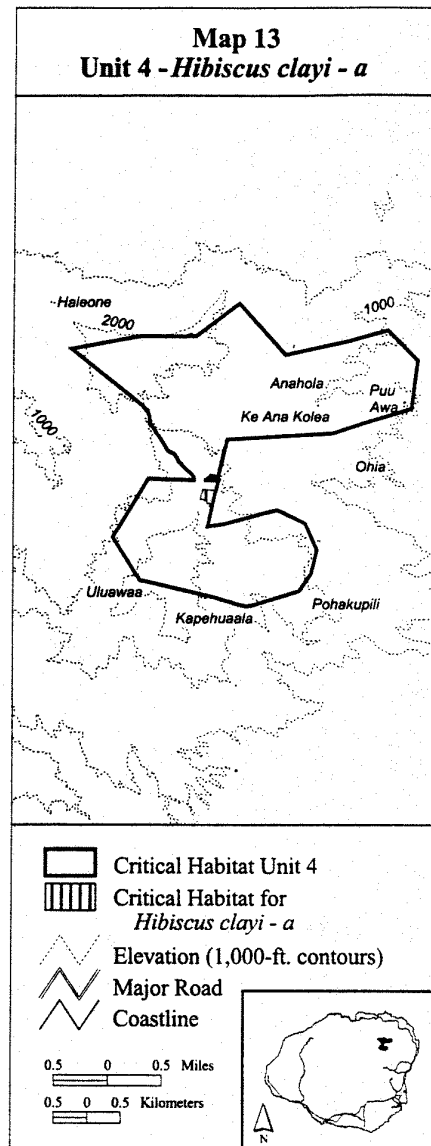


(xiii) Kauai 4—*Hibiscus clayi*—a (4 ha; 9 ac)

(A) Unit consists of the following 70 boundary points: Start at 457819, 2447272; 458020, 2447254; 457971, 2447038; 457967, 2447019; 457946, 2447009; 457942, 2447010; 457938, 2447011; 457936, 2447012; 457933, 2447015; 457932, 2447018; 457930, 2447025; 457932, 2447041; 457933, 2447055; 457933, 2447059; 457931, 2447065; 457930, 2447067; 457928, 2447067; 457921, 2447067; 457918, 2447067; 457917, 2447066; 457910, 2447062; 457908, 2447062; 457898, 2447060; 457896, 2447062; 457894, 2447065; 457893, 2447069; 457890, 2447077; 457888, 2447085; 457888, 2447086; 457887, 2447093; 457887, 2447095; 457884, 2447100; 457878, 2447105; 457871, 2447102; 457868, 2447102; 457858, 2447103; 457848, 2447108; 457844, 2447111; 457841,

2447115; 457838, 2447120; 457837, 2447123; 457835, 2447125; 457831, 2447127; 457828, 2447128; 457822, 2447128; 457818, 2447128; 457816, 2447127; 457810, 2447123; 457798, 2447118; 457794, 2447120; 457792, 2447125; 457792, 2447128; 457793, 2447135; 457795, 2447145; 457799, 2447165; 457800, 2447176; 457800, 2447183; 457800, 2447185; 457801, 2447192; 457803, 2447195; 457814, 2447209; 457818, 2447215; 457825, 2447224; 457826, 2447227; 457829, 2447234; 457829, 2447244; 457828, 2447246; 457825, 2447251; 457824, 2447254; 457823, 2447264; return to starting point.

(B) Note: Map 13 follows:



(xiv) Kauai 4—*Hibiscus clayi*—b (85 ha; 210 ac)

(A) Unit consists of the following 421 boundary points: Start at 458269, 2446775; 458887, 2446950; 459348,

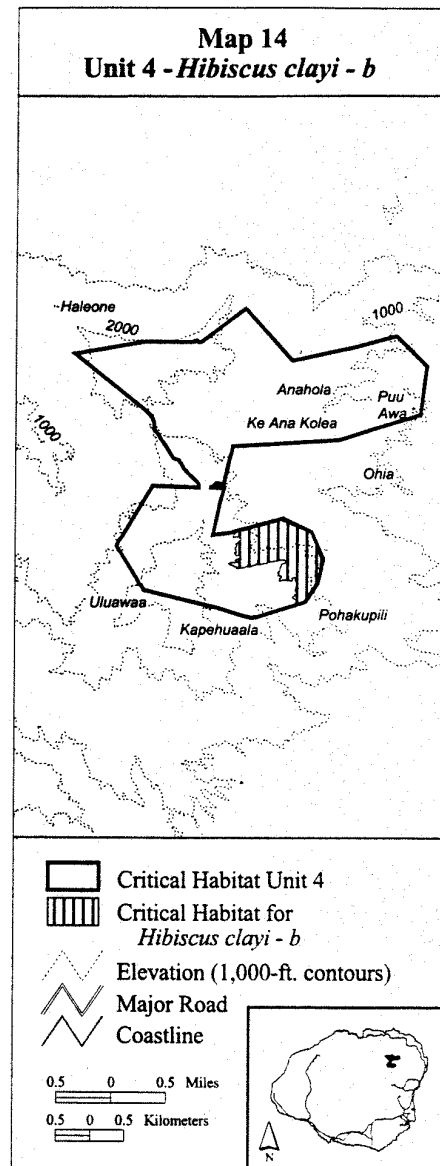
2446748; 459490, 2446382; 459454, 2446075; 459242, 2445757; 459159, 2445731; 459158, 2445731; 459148, 2445734; 459138, 2445735; 459131, 2445738; 459126, 2445743; 459125, 2445745; 459127, 2445747; 459138, 2445755; 459142, 2445761; 459144, 2445765; 459142, 2445769; 459138, 2445772; 459135, 2445775; 459116, 2445793; 459112, 2445795; 459110, 2445797; 459106, 2445798; 459102, 2445799; 459095, 2445802; 459089, 2445805; 459085, 2445812; 459082, 2445815; 459087, 2445825; 459093, 2445831; 459103, 2445841; 459106, 2445845; 459111, 2445852; 459114, 2445859; 459118, 2445863; 459120, 2445863; 459128, 2445866; 459133, 2445871; 459134, 2445875; 459135, 2445882; 459135, 2445885; 459135, 2445892; 459135, 2445895; 459133, 2445900; 459131, 2445905; 459126, 2445913; 459123, 2445915; 459118, 2445921; 459117, 2445924; 459116, 2445925; 459114, 2445935; 459116, 2445938; 459118, 2445941; 459123, 2445945; 459126, 2445948; 459130, 2445953; 459132, 2445955; 459133, 2445965; 459132, 2445969; 459131, 2445975; 459133, 2446005; 459130, 2446025; 459130, 2446035; 459131, 2446045; 459131, 2446048; 459129, 2446055; 459124, 2446061; 459118, 2446068; 459116, 2446073; 459115, 2446075; 459118, 2446086; 459120, 2446095; 459120, 2446096; 459118, 2446102; 459117, 2446104; 459113, 2446105; 459109, 2446106; 459097, 2446106; 459088, 2446105; 459086, 2446105; 459080, 2446103; 459073, 2446100; 459068, 2446097; 459067, 2446096; 459067, 2446095; 459068, 2446086; 459069, 2446066; 459070, 2446065; 459070, 2446064; 459068, 2446060; 459066, 2446057; 459058, 2446057; 459048, 2446059; 459044, 2446061; 459038, 2446063; 459028, 2446067; 459018, 2446064; 459008, 2446062; 458998, 2446067; 458992, 2446069; 458988, 2446070; 458978, 2446070; 458968, 2446070; 458958, 2446069; 458948, 2446071; 458942, 2446072; 458938, 2446072; 458918, 2446064; 458908, 2446061; 458898, 2446057; 458889, 2446056; 458888, 2446056; 458884, 2446061; 458883, 2446065; 458887, 2446076; 458896, 2446097; 458900, 2446104; 458901, 2446105; 458905, 2446109; 458908, 2446112; 458911, 2446115; 458916, 2446125; 458913, 2446130; 458908, 2446135; 458898, 2446136; 458888, 2446135; 458878, 2446136; 458871, 2446137; 458863, 2446140; 458858, 2446143; 458857, 2446144; 458857, 2446145; 458861, 2446152; 458864, 2446165; 458863, 2446179; 458862, 2446182; 458861, 2446185; 458865,

2446189; 458868, 2446191; 458872, 2446191; 458875, 2446192; 458878, 2446192; 458885, 2446195; 458887, 2446196; 458888, 2446197; 458892, 2446202; 458894, 2446205; 458895, 2446215; 458894, 2446225; 458892, 2446231; 458891, 2446237; 458890, 2446245; 458892, 2446251; 458893, 2446255; 458896, 2446257; 458901, 2446262; 458904, 2446265; 458906, 2446267; 458912, 2446275; 458912, 2446281; 458912, 2446285; 458913, 2446295; 458914, 2446299; 458918, 2446302; 458920, 2446303; 458928, 2446305; 458938, 2446307; 458948, 2446311; 458968, 2446322; 458970, 2446323; 458971, 2446325; 458978, 2446335; 458982, 2446341; 458985, 2446345; 458983, 2446350; 458978, 2446355; 458969, 2446356; 458968, 2446356; 458953, 2446360; 458948, 2446361; 458938, 2446362; 458936, 2446362; 458931, 2446362; 458922, 2446361; 458918, 2446361; 458902, 2446361; 458888, 2446361; 458878, 2446358; 458871, 2446355; 458868, 2446354; 458858, 2446354; 458853, 2446355; 458848, 2446356; 458847, 2446356; 458838, 2446354; 458828, 2446349; 458820, 2446346; 458818, 2446346; 458798, 2446342; 458778, 2446337; 458768, 2446336; 458762, 2446338; 458758, 2446339; 458748, 2446341; 458738, 2446341; 458726, 2446338; 458718, 2446335; 458717, 2446335; 458712, 2446331; 458708, 2446327; 458707, 2446325; 458704, 2446319; 458700, 2446315; 458699, 2446314; 458698, 2446314; 458691, 2446312; 458688, 2446312; 458678, 2446311; 458668, 2446310; 458664, 2446309; 458658, 2446308; 458641, 2446303; 458617, 2446296; 458608, 2446294; 458588, 2446292; 458578, 2446291; 458568, 2446295; 458561, 2446298; 458558, 2446299; 458548, 2446300; 458545, 2446299; 458528, 2446290; 458508, 2446289; 458506, 2446287; 458503, 2446285; 458498, 2446282; 458494, 2446279; 458485, 2446275; 458480, 2446273; 458478, 2446273; 458468, 2446270; 458458, 2446271; 458453, 2446270; 458448, 2446269; 458444, 2446265; 458438, 2446262; 458434, 2446260; 458428, 2446259; 458417, 2446264; 458416, 2446265; 458412, 2446269; 458408, 2446271; 458398, 2446267; 458397, 2446265; 458388, 2446266; 458382, 2446251; 458378, 2446249; 458368, 2446249; 458358, 2446251; 458348, 2446249; 458345, 2446248; 458338, 2446246; 458328, 2446242; 458321, 2446243; 458308, 2446244; 458300, 2446243; 458298, 2446243; 458293, 2446241; 458288, 2446239; 458278, 2446236; 458270, 2446237; 458258, 2446241; 458256, 2446243; 458255,

2446245; 458251, 2446255; 458250, 2446257; 458248, 2446258; 458244, 2446260; 458228, 2446268; 458223, 2446270; 458218, 2446271; 458214, 2446271; 458208, 2446273; 458207, 2446274; 458205, 2446275; 458202, 2446279; 458198, 2446282; 458196, 2446283; 458187, 2446284; 458178, 2446285; 458172, 2446284; 458168, 2446284; 458167, 2446284; 458158, 2446289; 458155, 2446292; 458147, 2446300; 458145, 2446302; 458143, 2446305; 458148, 2446310; 458161, 2446315; 458178, 2446321; 458189, 2446325; 458196, 2446327; 458198, 2446328; 458218, 2446326; 458238, 2446326; 458248, 2446326; 458257, 2446326; 458268, 2446328; 458273, 2446331; 458278, 2446333; 458280, 2446335; 458278, 2446337; 458268, 2446345; 458261, 2446348; 458258, 2446349; 458248, 2446351; 458237, 2446354; 458232, 2446355; 458239, 2446365; 458252, 2446371; 458273, 2446380; 458278, 2446382; 458287, 2446385; 458294, 2446389; 458300, 2446395; 458308, 2446406; 458313, 2446411; 458315, 2446415; 458312, 2446419; 458308, 2446421; 458288, 2446427; 458278, 2446427; 458276, 2446427; 458269, 2446426; 458258, 2446425; 458258, 2446425; 458252, 2446429; 458248, 2446431; 458246, 2446433; 458244, 2446435; 458242, 2446439; 458239, 2446446; 458238, 2446447; 458235, 2446451; 458229, 2446455; 458226, 2446463; 458225, 2446465; 458228, 2446466; 458236, 2446468; 458243, 2446469; 458244, 2446469; 458248, 2446471; 458250, 2446473; 458250, 2446475; 458249, 2446486; 458246, 2446495; 458241, 2446505; 458240, 2446507; 458236, 2446513; 458234, 2446515; 458231, 2446525; 458233, 2446530; 458235, 2446535; 458238, 2446539; 458242, 2446541; 458245, 2446545; 458251, 2446553; 458252, 2446555; 458254, 2446559; 458257, 2446565; 458253, 2446575; 458250, 2446577; 458240, 2446585; 458243, 2446590; 458249, 2446595; 458255, 2446598; 458262, 2446602; 458268, 2446605; 458279, 2446615; 458288, 2446625; 458293, 2446630; 458298, 2446634; 458304, 2446639; 458311, 2446645; 458320, 2446655; 458321, 2446665; 458315, 2446672; 458312, 2446675; 458308, 2446677; 458302, 2446679; 458288, 2446682; 458286, 2446683; 458284, 2446685; 458282, 2446688; 458278, 2446693; 458277, 2446694; 458275, 2446695; 458268, 2446698; 458258, 2446697; 458248, 2446693; 458242, 2446691; 458238, 2446690; 458228, 2446690; 458224, 2446689; 458218, 2446687; 458212, 2446685; 458208, 2446684; 458207, 2446684; 458203,

2446685; 458200, 2446687; 458200, 2446688; 458201, 2446695; 458206, 2446707; 458208, 2446710; 458214, 2446719; 458228, 2446739; 458230, 2446741; 458247, 2446757; 458258, 2446772; return to starting point.

(B) Note: Map 14 follows:



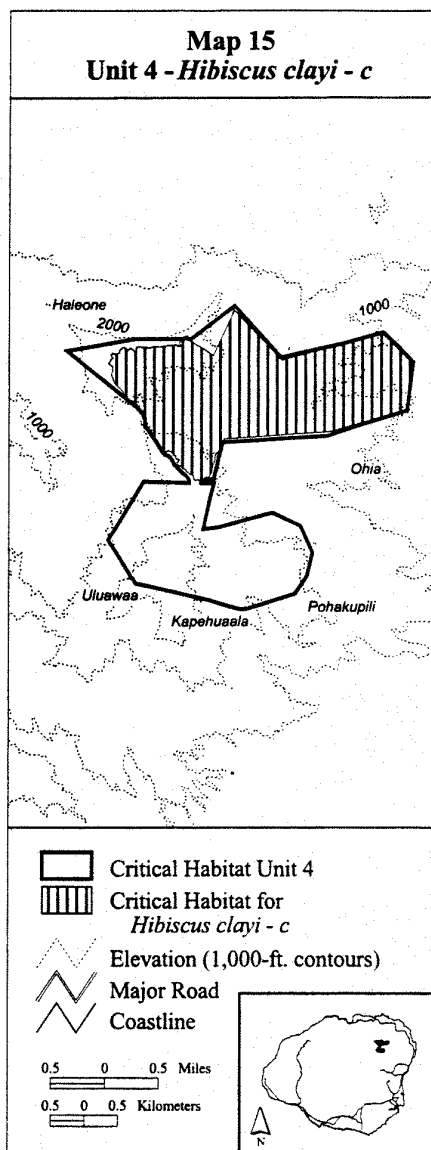
(xv) Kauai 4—*Hibiscus clayi*—c (590 ha; 1,458 ac)

(A) Unit consists of the following 192 boundary points: Start at 457668, 2449552; 457672, 2449547; 457689, 2449529; 457699, 2449522; 457714, 2449515; 457742, 2449506; 457770, 2449483; 457776, 2449475; 457788, 2449467; 457825, 2449449; 457846, 2449433; 457856, 2449429; 457917, 2449393; 457954, 2449369; 458004, 2449331; 458025, 2449313; 458037, 2449307; 458058, 2449301; 458141, 2449491; 458199, 2449615; 458316, 2449881; 458363, 2449984; 459083,

2449224; 460578, 2449637; 461026,  
 2449189; 460925, 2448495; 459811,  
 2448172; 458204, 2448065; 458165,  
 2447893; 458096, 2447851; 458085,  
 2447839; 458077, 2447822; 458073,  
 2447793; 458073, 2447739; 458057,  
 2447694; 458046, 2447671; 458033,  
 2447617; 458027, 2447575; 458026,  
 2447556; 458023, 2447548; 458009,  
 2447525; 457998, 2447517; 457979,  
 2447491; 457946, 2447469; 457927,  
 2447446; 457899, 2447424; 457864,  
 2447422; 457848, 2447449; 457822,  
 2447451; 457802, 2447444; 457771,  
 2447453; 457756, 2447462; 457757,  
 2447484; 457751, 2447506; 457752,  
 2447524; 457741, 2447534; 457689,  
 2447539; 457676, 2447562; 457651,  
 2447573; 457640, 2447603; 457586,  
 2447621; 457575, 2447659; 457553,  
 2447656; 457529, 2447667; 457502,  
 2447707; 457532, 2447722; 457544,  
 2447753; 457500, 2447771; 457492,  
 2447810; 457459, 2447812; 457439,  
 2447864; 457412, 2447879; 457371,  
 2447884; 457345, 2447859; 457332,  
 2447868; 457274, 2447898; 457234,  
 2447967; 457193, 2448027; 457148,  
 2448093; 457124, 2448122; 457112,  
 2448143; 457089, 2448187; 457076,  
 2448209; 457048, 2448243; 457032,  
 2448261; 457029, 2448269; 457028,  
 2448278; 457031, 2448299; 457032,  
 2448323; 457031, 2448342; 457028,  
 2448361; 457016, 2448395; 457005,  
 2448416; 457002, 2448438; 456998,  
 2448448; 456991, 2448459; 456973,  
 2448474; 456957, 2448488; 456943,  
 2448512; 456930, 2448544; 456916,  
 2448568; 456896, 2448595; 456883,  
 2448609; 456870, 2448619; 456856,  
 2448627; 456832, 2448632; 456801,  
 2448644; 456771, 2448662; 456748,  
 2448682; 456733, 2448698; 456713,  
 2448726; 456697, 2448759; 456679,  
 2448787; 456671, 2448799; 456652,  
 2448821; 456635, 2448836; 456615,  
 2448849; 456596, 2448859; 456583,  
 2448874; 456572, 2448891; 456563,  
 2448911; 456551, 2448951; 456541,  
 2448985; 456535, 2449004; 456530,  
 2449029; 456546, 2449060; 456540,  
 2449095; 456553, 2449134; 456490,  
 2449179; 456513, 2449208; 456520,  
 2449240; 456555, 2449262; 456524,  
 2449303; 456546, 2449327; 456600,  
 2449316; 456652, 2449333; 456652,  
 2449376; 456672, 2449396; 456706,  
 2449417; 456733, 2449409; 456778,  
 2449374; 456817, 2449409; 456862,  
 2449378; 456880, 2449352; 456895,  
 2449372; 456897, 2449409; 456924,  
 2449429; 456941, 2449429; 456969,  
 2449426; 456991, 2449421; 457000,  
 2449421; 457034, 2449425; 457042,  
 2449425; 457049, 2449422; 457064,  
 2449414; 457073, 2449409; 457083,  
 2449408; 457097, 2449407; 457107,

2449413; 457123, 2449423; 457132,  
 2449429; 457141, 2449431; 457168,  
 2449428; 457205, 2449431; 457229,  
 2449432; 457255, 2449429; 457276,  
 2449429; 457289, 2449431; 457300,  
 2449437; 457307, 2449440; 457314,  
 2449440; 457325, 2449437; 457352,  
 2449440; 457363, 2449443; 457395,  
 2449451; 457417, 2449451; 457492,  
 2449461; 457518, 2449446; 457527,  
 2449437; 457542, 2449435; 457550,  
 2449428; 457557, 2449434; 457555,  
 2449453; 457546, 2449470; 457543,  
 2449490; 457547, 2449505; 457592,  
 2449538; 457610, 2449548; 457619,  
 2449546; 457638, 2449550; 457649,  
 2449548; 457660, 2449547; return to  
 starting point.

(B) Note: Map 15 follows:



(xvi) Kauai 4—*Hibiscus clayi*—d (48 ha; 119 ac)

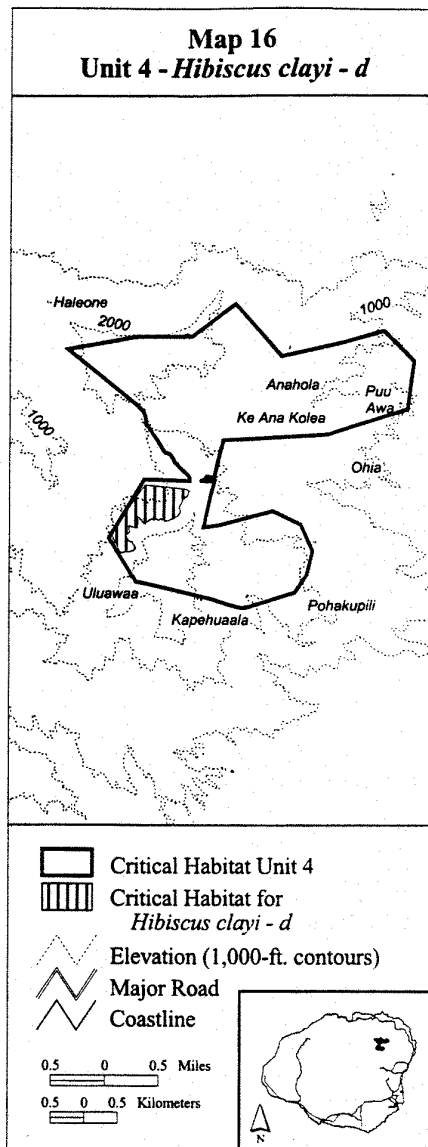
(A) Unit consists of the following 283 boundary points: Start at 457027,

2447344; 457644, 2447288; 457645,  
 2447282; 457658, 2447272; 457670,  
 2447265; 457675, 2447261; 457678,  
 2447259; 457680, 2447257; 457682,  
 2447255; 457680, 2447245; 457678,  
 2447241; 457676, 2447237; 457674,  
 2447235; 457669, 2447225; 457666,  
 2447215; 457663, 2447205; 457662,  
 2447195; 457661, 2447192; 457657,  
 2447185; 457651, 2447175; 457650,  
 2447173; 457648, 2447172; 457644,  
 2447169; 457638, 2447166; 457637,  
 2447166; 457631, 2447162; 457628,  
 2447160; 457625, 2447158; 457621,  
 2447152; 457618, 2447148; 457608,  
 2447139; 457605, 2447138; 457602,  
 2447135; 457600, 2447133; 457595,  
 2447128; 457591, 2447122; 457586,  
 2447115; 457584, 2447109; 457584,  
 2447105; 457582, 2447095; 457577,  
 2447086; 457576, 2447085; 457573,  
 2447075; 457571, 2447072; 457568,  
 2447068; 457564, 2447065; 457561,  
 2447062; 457556, 2447057; 457555,  
 2447055; 457552, 2447051; 457541,  
 2447032; 457537, 2447025; 457536,  
 2447017; 457536, 2447015; 457536,  
 2447012; 457537, 2447005; 457541,  
 2446995; 457545, 2446985; 457546,  
 2446983; 457557, 2446955; 457560,  
 2446945; 457558, 2446941; 457556,  
 2446937; 457551, 2446932; 457545,  
 2446928; 457540, 2446924; 457535,  
 2446919; 457531, 2446913; 457527,  
 2446906; 457524, 2446899; 457523,  
 2446895; 457522, 2446892; 457518,  
 2446887; 457517, 2446885; 457512,  
 2446881; 457508, 2446880; 457504,  
 2446879; 457497, 2446877; 457489,  
 2446874; 457483, 2446871; 457478,  
 2446868; 457471, 2446863; 457465,  
 2446858; 457458, 2446852; 457452,  
 2446845; 457448, 2446842; 457438,  
 2446838; 457428, 2446838; 457418,  
 2446837; 457408, 2446834; 457403,  
 2446831; 457398, 2446828; 457391,  
 2446823; 457385, 2446818; 457381,  
 2446815; 457379, 2446814; 457378,  
 2446814; 457371, 2446812; 457358,  
 2446810; 457354, 2446809; 457347,  
 2446807; 457344, 2446805; 457338,  
 2446803; 457336, 2446803; 457328,  
 2446805; 457327, 2446805; 457322,  
 2446809; 457319, 2446815; 457318,  
 2446825; 457308, 2446825; 457302,  
 2446828; 457298, 2446830; 457268,  
 2446834; 457258, 2446833; 457248,  
 2446831; 457244, 2446829; 457236,  
 2446825; 457228, 2446822; 457225,  
 2446822; 457218, 2446821; 457216,  
 2446823; 457213, 2446825; 457211,  
 2446828; 457208, 2446831; 457206,  
 2446833; 457200, 2446837; 457198,  
 2446838; 457191, 2446838; 457188,  
 2446838; 457168, 2446832; 457158,  
 2446831; 457155, 2446832; 457148,  
 2446834; 457138, 2446839; 457128,  
 2446839; 457118, 2446836; 457108,

2446831; 457088, 2446819; 457078,  
 2446813; 457068, 2446807; 457057,  
 2446796; 457044, 2446780; 457041,  
 2446775; 457038, 2446772; 457035,  
 2446769; 457028, 2446765; 457018,  
 2446765; 457013, 2446770; 457008,  
 2446774; 457007, 2446775; 457003,  
 2446780; 456994, 2446791; 456990,  
 2446797; 456982, 2446809; 456978,  
 2446816; 456968, 2446830; 456958,  
 2446844; 456950, 2446855; 456940,  
 2446867; 456938, 2446868; 456928,  
 2446872; 456918, 2446869; 456916,  
 2446867; 456914, 2446865; 456912,  
 2446861; 456911, 2446855; 456912,  
 2446845; 456914, 2446835; 456917,  
 2446825; 456919, 2446816; 456921,  
 2446808; 456924, 2446795; 456923,  
 2446785; 456920, 2446775; 456920,  
 2446774; 456920, 2446765; 456921,  
 2446758; 456921, 2446753; 456921,  
 2446745; 456920, 2446743; 456917,  
 2446725; 456916, 2446718; 456915,  
 2446715; 456912, 2446712; 456908,  
 2446710; 456898, 2446708; 456888,  
 2446707; 456882, 2446709; 456878,  
 2446710; 456868, 2446715; 456858,  
 2446720; 456854, 2446721; 456839,  
 2446726; 456823, 2446730; 456808,  
 2446732; 456800, 2446734; 456789,  
 2446735; 456788, 2446734; 456786,  
 2446728; 456785, 2446719; 456785,  
 2446706; 456786, 2446696; 456788,  
 2446686; 456791, 2446678; 456793,  
 2446676; 456794, 2446672; 456797,  
 2446664; 456798, 2446656; 456797,  
 2446647; 456797, 2446646; 456793,  
 2446641; 456777, 2446627; 456775,  
 2446626; 456771, 2446623; 456765,  
 2446619; 456758, 2446616; 456748,  
 2446610; 456746, 2446608; 456743,  
 2446606; 456736, 2446596; 456742,  
 2446586; 456748, 2446581; 456751,  
 2446579; 456753, 2446576; 456756,  
 2446566; 456763, 2446556; 456770,  
 2446546; 456768, 2446536; 456769,  
 2446527; 456770, 2446526; 456775,  
 2446522; 456778, 2446521; 456788,  
 2446518; 456791, 2446516; 456795,  
 2446512; 456798, 2446509; 456801,  
 2446508; 456808, 2446505; 456816,  
 2446504; 456838, 2446501; 456842,  
 2446499; 456844, 2446496; 456844,  
 2446486; 456843, 2446476; 456845,  
 2446472; 456850, 2446467; 456856,  
 2446463; 456863, 2446460; 456869,  
 2446456; 456870, 2446456; 456881,  
 2446439; 456882, 2446436; 456883,  
 2446426; 456882, 2446416; 456883,  
 2446406; 456883, 2446401; 456882,  
 2446396; 456881, 2446394; 456878,  
 2446392; 456852, 2446372; 456848,  
 2446370; 456845, 2446369; 456830,  
 2446364; 456822, 2446362; 456808,  
 2446358; 456788, 2446354; 456778,  
 2446355; 456768, 2446358; 456758,  
 2446360; 456748, 2446361; 456738,  
 2446360; 456728, 2446357; 456727,

2446356; 456716, 2446348; 456709,  
 2446345; 456708, 2446345; 456700,  
 2446344; 456698, 2446344; 456688,  
 2446342; 456678, 2446340; 456675,  
 2446339; 456668, 2446337; 456525,  
 2446628; return to starting point.

(B) Note: Map 16 follows:



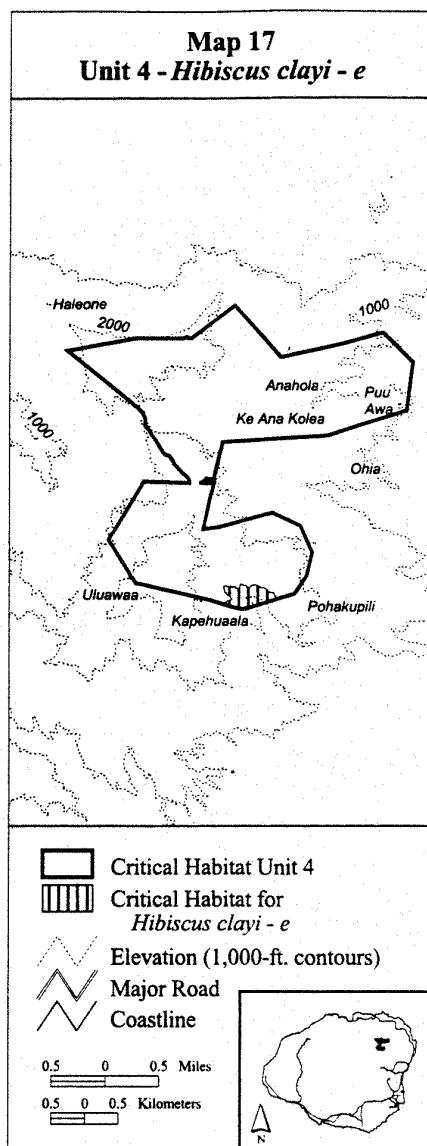
(xvii) Kauai 4—*Hibiscus clayi*—e (19 ha; 47 ac)

(A) Unit consists of the following 225 boundary points: Start at 459000, 2445681; 458500, 2445525; 458499, 2445526; 458498, 2445527; 458493, 2445530; 458488, 2445532; 458485, 2445533; 458478, 2445534; 458469, 2445547; 458468, 2445547; 458463, 2445550; 458458, 2445552; 458448, 2445549; 458440, 2445544; 458428, 2445540; 458422, 2445539; 458288, 2445578; 458285, 2445582; 458281, 2445586; 458273, 2445590; 458268, 2445593; 458266, 2445596; 458263, 2445601; 458259, 2445606; 458254,

2445611; 458248, 2445616; 458248, 2445616; 458244, 2445622; 458244, 2445626; 458248, 2445632; 458258, 2445645; 458259, 2445646; 458265, 2445649; 458268, 2445650; 458278, 2445651; 458283, 2445651; 458291, 2445653; 458306, 2445656; 458323, 2445661; 458328, 2445663; 458332, 2445666; 458333, 2445671; 458334, 2445676; 458328, 2445683; 458326, 2445686; 458318, 2445691; 458316, 2445693; 458312, 2445696; 458311, 2445698; 458307, 2445704; 458288, 2445726; 458283, 2445731; 458274, 2445736; 458271, 2445738; 458268, 2445740; 458265, 2445743; 458263, 2445746; 458261, 2445748; 458257, 2445754; 458255, 2445756; 458251, 2445758; 458248, 2445760; 458244, 2445766; 458242, 2445770; 458234, 2445782; 458230, 2445786; 458229, 2445787; 458228, 2445788; 458226, 2445793; 458225, 2445796; 458224, 2445806; 458222, 2445816; 458217, 2445836; 458212, 2445849; 458207, 2445855; 458207, 2445856; 458207, 2445857; 458211, 2445863; 458215, 2445866; 458217, 2445867; 458228, 2445872; 458232, 2445872; 458235, 2445872; 458245, 2445872; 458248, 2445872; 458253, 2445870; 458261, 2445866; 458266, 2445863; 458268, 2445862; 458278, 2445859; 458292, 2445862; 458302, 2445866; 458307, 2445867; 458311, 2445869; 458318, 2445870; 458327, 2445866; 458328, 2445865; 458332, 2445860; 458336, 2445854; 458338, 2445852; 458348, 2445850; 458351, 2445853; 458356, 2445858; 458358, 2445861; 458368, 2445866; 458375, 2445862; 458378, 2445860; 458388, 2445849; 458392, 2445846; 458398, 2445841; 458408, 2445836; 458418, 2445833; 458428, 2445833; 458431, 2445833; 458439, 2445835; 458446, 2445838; 458448, 2445841; 458450, 2445844; 458452, 2445852; 458454, 2445866; 458455, 2445876; 458457, 2445885; 458457, 2445887; 458458, 2445890; 458462, 2445892; 458468, 2445893; 458478, 2445892; 458482, 2445892; 458486, 2445893; 458488, 2445893; 458495, 2445892; 458498, 2445891; 458516, 2445883; 458523, 2445880; 458528, 2445876; 458536, 2445873; 458538, 2445872; 458548, 2445871; 458551, 2445868; 458552, 2445865; 458555, 2445862; 458558, 2445859; 458565, 2445855; 458567, 2445854; 458568, 2445854; 458578, 2445853; 458588, 2445849; 458598, 2445849; 458603, 2445851; 458608, 2445853; 458610, 2445855; 458618, 2445865; 458623, 2445871; 458625, 2445875; 458628, 2445879; 458632, 2445882; 458638, 2445885; 458647, 2445884; 458658, 2445884; 458663, 2445885; 458667,

2445886; 458688, 2445888; 458691, 2445888; 458698, 2445885; 458704, 2445881; 458708, 2445877; 458709, 2445876; 458718, 2445873; 458724, 2445871; 458728, 2445870; 458731, 2445868; 458735, 2445865; 458738, 2445863; 458743, 2445860; 458751, 2445858; 458758, 2445856; 458759, 2445855; 458768, 2445849; 458771, 2445848; 458778, 2445845; 458788, 2445844; 458798, 2445844; 458808, 2445842; 458818, 2445840; 458821, 2445838; 458825, 2445835; 458826, 2445834; 458828, 2445832; 458833, 2445830; 458840, 2445827; 458843, 2445825; 458858, 2445819; 458861, 2445818; 458864, 2445815; 458866, 2445813; 458870, 2445807; 458874, 2445801; 458878, 2445795; 458884, 2445791; 458891, 2445788; 458898, 2445786; 458900, 2445785; 458908, 2445781; 458915, 2445775; 458918, 2445773; 458928, 2445770; 458938, 2445770; 458948, 2445773; 458955, 2445772; 458958, 2445772; 458962, 2445769; 458963, 2445765; 458963, 2445755; 458964, 2445745; 458967, 2445735; 458971, 2445728; 458973, 2445725; 458975, 2445722; 458980, 2445717; 458983, 2445715; 458985, 2445712; 458988, 2445708; 458989, 2445706; 458992, 2445695; 458997, 2445685; return to starting point.

(B) Note: Map 17 follows:

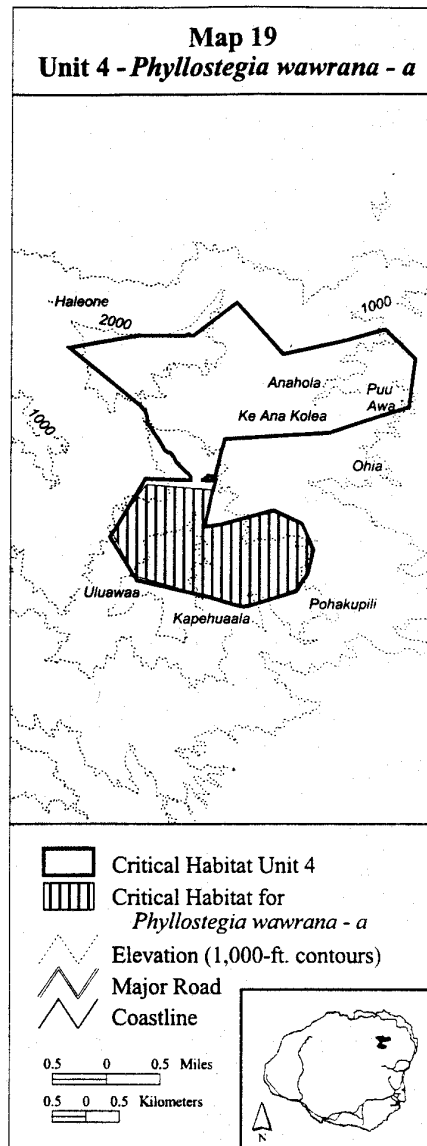
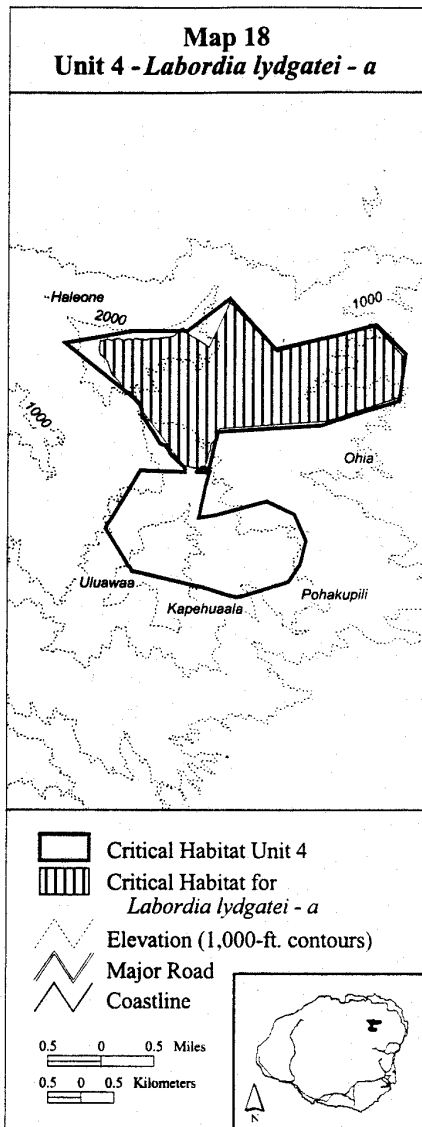


(xviii) Kauai 4—*Labordia lydgatei*—a (588 ha; 1,453 ac)

(A) Unit consists of the following 170 boundary points: Start at 457589, 2449536; 457687, 2449531; 457689, 2449529; 457699, 2449522; 457714, 2449515; 457742, 2449506; 457770, 2449483; 457776, 2449475; 457788, 2449467; 457825, 2449449; 457846, 2449433; 457856, 2449429; 457917, 2449393; 457954, 2449369; 458004, 2449331; 458025, 2449313; 458037, 2449307; 458058, 2449301; 458141, 2449491; 458199, 2449615; 458316, 2449881; 458363, 2449983; 458397, 2449949; 459083, 2449224; 460011, 2449480; 460567, 2449609; 461011, 2449133; 460921, 2448534; 459969, 2448218; 459811, 2448172; 458204, 2448065; 458165, 2447893; 458096, 2447851; 458085, 2447839; 458077, 2447822; 458073, 2447793; 458073, 2447739; 458057, 2447694; 458046, 2447671; 458033, 2447617; 458027,

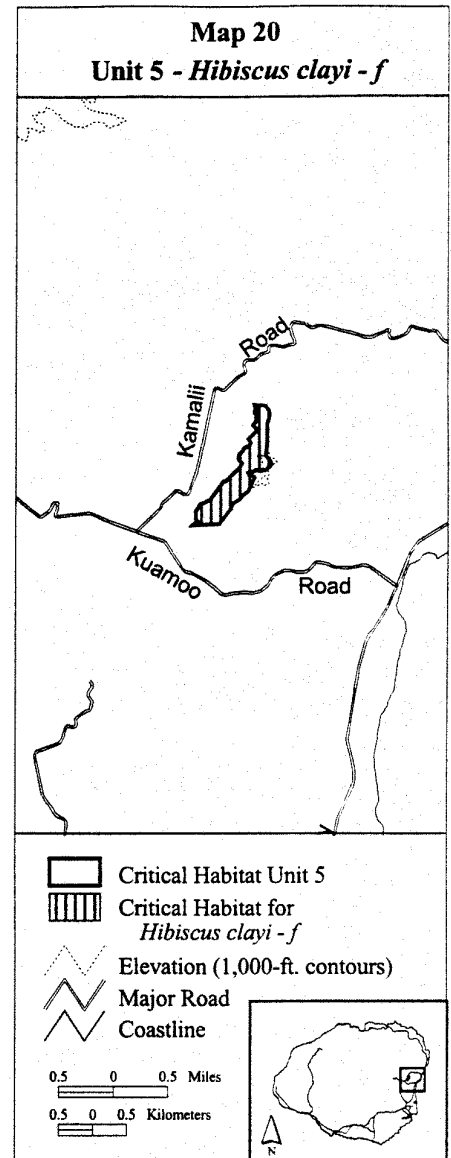
2447575; 458026, 2447556; 458023, 2447548; 458009, 2447525; 457998, 2447517; 457979, 2447491; 457946, 2447469; 457930, 2447450; 457669, 2447502; 457031, 2448340; 457031, 2448342; 457028, 2448361; 457016, 2448395; 457005, 2448416; 457002, 2448438; 456998, 2448448; 456991, 2448459; 456973, 2448474; 456957, 2448488; 456943, 2448512; 456930, 2448544; 456916, 2448568; 456896, 2448595; 456883, 2448609; 456870, 2448619; 456856, 2448627; 456832, 2448632; 456801, 2448644; 456771, 2448662; 456748, 2448682; 456733, 2448698; 456713, 2448726; 456697, 2448759; 456679, 2448787; 456671, 2448799; 456652, 2448821; 456635, 2448836; 456615, 2448849; 456596, 2448859; 456583, 2448874; 456572, 2448891; 456563, 2448911; 456551, 2448951; 456541, 2448985; 456535, 2449004; 456530, 2449029; 456526, 2449045; 456516, 2449067; 456504, 2449086; 456491, 2449106; 456476, 2449128; 456462, 2449139; 456446, 2449150; 456435, 2449153; 456419, 2449170; 456404, 2449186; 456395, 2449205; 456387, 2449236; 456386, 2449264; 456390, 2449313; 456395, 2449355; 456394, 2449367; 456394, 2449381; 456397, 2449394; 456401, 2449399; 456407, 2449399; 456420, 2449397; 456439, 2449398; 456457, 2449404; 456483, 2449414; 456501, 2449416; 456513, 2449416; 456533, 2449412; 456569, 2449406; 456586, 2449405; 456603, 2449410; 456620, 2449418; 456633, 2449423; 456647, 2449426; 456662, 2449428; 456681, 2449425; 456706, 2449417; 456733, 2449409; 456752, 2449403; 456769, 2449404; 456787, 2449409; 456807, 2449421; 456818, 2449430; 456826, 2449432; 456836, 2449428; 456852, 2449419; 456862, 2449411; 456869, 2449407; 456878, 2449407; 456889, 2449412; 456910, 2449422; 456924, 2449429; 456941, 2449429; 456969, 2449426; 456991, 2449421; 457000, 2449421; 457034, 2449425; 457042, 2449425; 457049, 2449422; 457064, 2449414; 457073, 2449409; 457083, 2449408; 457097, 2449407; 457107, 2449413; 457123, 2449423; 457132, 2449429; 457141, 2449431; 457168, 2449428; 457205, 2449431; 457229, 2449432; 457255, 2449429; 457276, 2449429; 457289, 2449431; 457300, 2449437; 457307, 2449440; 457314, 2449440; 457325, 2449437; 457352, 2449440; 457363, 2449443; 457395, 2449451; 457417, 2449451; 457492, 2449461; 457515, 2449471; 457522, 2449475; 457547, 2449505; return to starting point.

(B) Note: Map 18 follows:



2439792; 463256, 2439766; 463183, 2439745; 463194, 2439724; 463246, 2439703; 463272, 2439677; 463183, 2439474; 463126, 2439438; 463063, 2439365; 462954, 2439297; 462938, 2439230; 462756, 2439001; return to starting point.

(B) Note: Map 20 follows:



(xxi) Kauai 5—*Munroidendron racemosum*—a (60 ha; 148 ac)

(A) Unit consists of the following 52 boundary points: Start at 462370, 2438990; 462438, 2439048; 462412, 2439074; 462412, 2439188; 462475, 2439287; 462548, 2439318; 462631, 2439365; 462709, 2439469; 462819, 2439625; 462845, 2439625; 463011, 2439781; 463043, 2439818; 463084, 2439885; 463074, 2439911; 463037, 2439953; 463048, 2440021; 463079, 2440042; 463121, 2440109; 463162, 2440140; 463194, 2440140; 463214, 2440192; 463183, 2440245; 463313, 2440375; 463246, 2440448; 463287, 2440505; 463298, 2440609; 463256, 2440635; 463287, 2440671; 463272, 2440744; 463433, 2440739; 463496, 2440650; 463491, 2440588; 463465, 2440479; 463459, 2440333; 463465, 2440187; 463438, 2440000; 463511, 2439916; 463517, 2439870; 463449, 2439802; 463360, 2439771; 463287,

(xix) Kauai 4—*Phyllostegia wawrana*—a (352 ha; 869 ac)

(A) Unit consists of the following 25 boundary points: Start at 457390, 2445835; 457088, 2445921; 456838, 2445992; 456709, 2446255; 456732, 2446269; 456702, 2446268; 456529, 2446620; 456709, 2446891; 457027, 2447344; 458020, 2447262; 457940, 2447000; 457957, 2446974; 457900, 2446720; 458214, 2446760; 458463, 2446830; 458936, 2446928; 459341, 2446751; 459365, 2446704; 459490, 2446382; 459454, 2446075; 459260, 2445784; 458941, 2445663; 458510, 2445529; 458255, 2445590; 458262, 2445585; return to starting point.

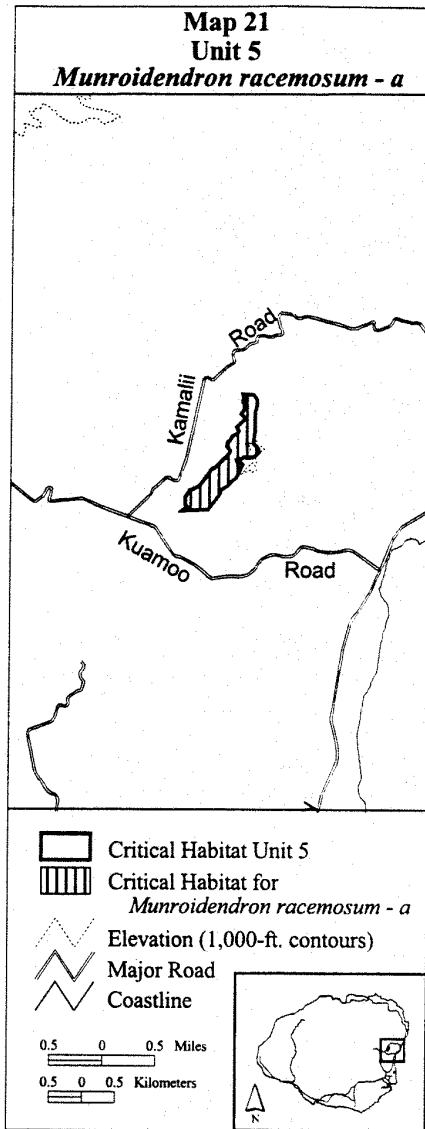
(B) Note: Map 19 follows:

(xx) Kauai 5—*Hibiscus clayi*—f (60 ha; 148 ac)

(A) Unit consists of the following 52 boundary points: Start at 462370, 2438990; 462438, 2439048; 462412, 2439074; 462412, 2439188; 462475, 2439287; 462548, 2439318; 462631, 2439365; 462709, 2439469; 462819, 2439625; 462845, 2439625; 463011, 2439781; 463043, 2439818; 463084, 2439885; 463074, 2439911; 463037, 2439953; 463048, 2440021; 463079, 2440042; 463121, 2440109; 463162, 2440140; 463194, 2440140; 463214, 2440192; 463183, 2440245; 463313, 2440375; 463246, 2440448; 463287, 2440505; 463298, 2440609; 463256, 2440635; 463287, 2440671; 463272, 2440744; 463433, 2440739; 463496, 2440650; 463491, 2440588; 463465, 2440479; 463459, 2440333; 463465, 2440187; 463438, 2440000; 463511, 2439916; 463517, 2439870; 463449, 2439802; 463360, 2439771; 463287,

2440192; 463183, 2440245; 463313, 2440375; 463246, 2440448; 463287, 2440505; 463298, 2440609; 463256, 2440635; 463287, 2440671; 463272, 2440744; 463433, 2440739; 463496, 2440650; 463491, 2440588; 463465, 2440479; 463459, 2440333; 463465, 2440187; 463438, 2440000; 463511, 2439916; 463517, 2439870; 463449, 2439802; 463360, 2439771; 463287, 2439792; 463256, 2439766; 463183, 2439745; 463194, 2439724; 463246, 2439703; 463272, 2439677; 463183, 2439474; 463126, 2439438; 463063, 2439365; 462954, 2439297; 462938, 2439230; 462756, 2439001; return to starting point.

(B) Note: Map 21 follows:

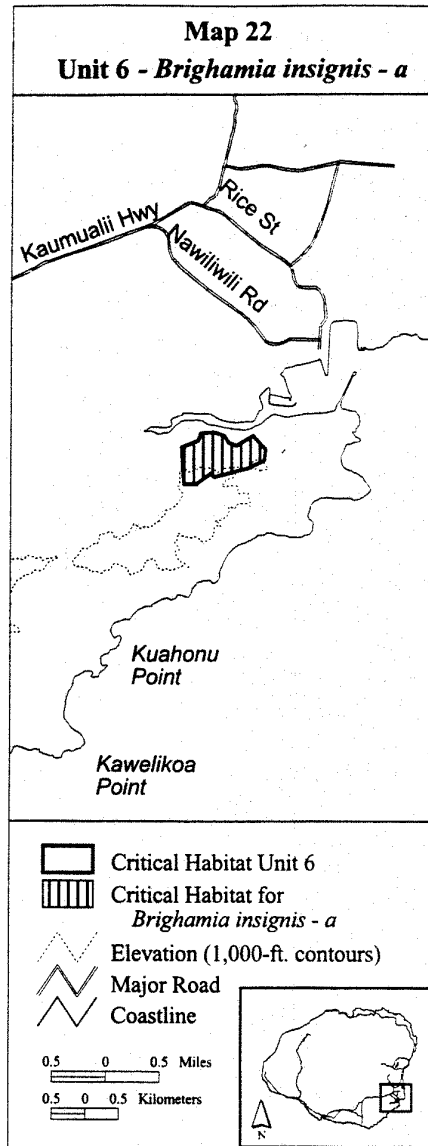


(xxii) Kauai 6—*Brighamia insignis*—a (63 ha; 156 ac)

(A) Unit consists of the following 22 boundary points: Start at 462682, 2426559; 462657, 2426391; 462532, 2426329; 462422, 2426274; 462417,

2426272; 462234, 2426225; 462055, 2426178; 461911, 2426141; 461862, 2426197; 461719, 2426089; 461655, 2426041; 461649, 2426036; 461464, 2426045; 461448, 2426165; 461433, 2426586; 461678, 2426687; 461714, 2426795; 461907, 2426808; 462068, 2426762; 462130, 2426658; 462247, 2426612; 462487, 2426760; return to starting point.

(B) Note: Map 22 follows:



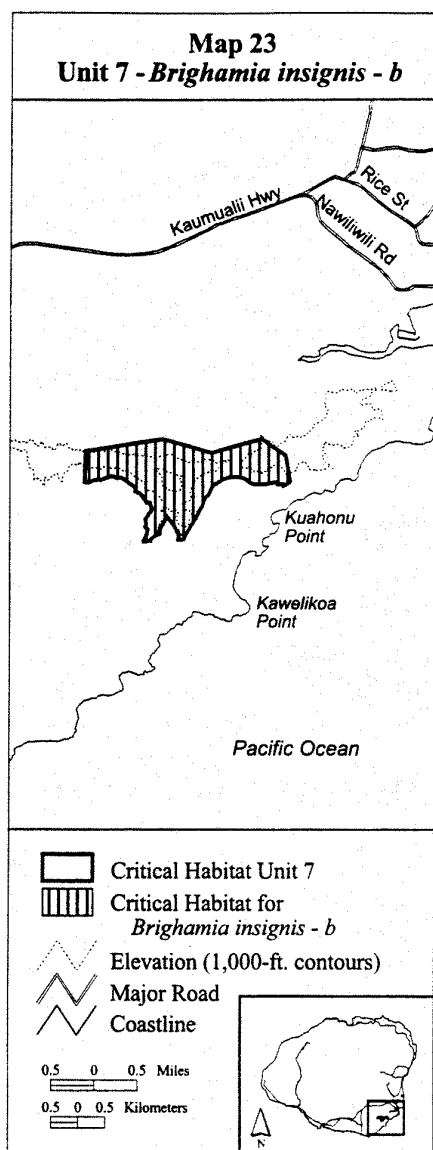
(xxiii) Kauai 7—*Brighamia insignis*—b (341 ha; 842 ac)

(A) Unit consists of the following 118 boundary points: Start at 458142, 2423455; 458117, 2423452; 458106, 2423450; 458074, 2423446; 458031, 2423441; 458022, 2423439; 458014, 2423466; 458021, 2423472; 458036, 2423485; 458058, 2423560; 458086, 2423655; 458073, 2423681; 458043, 2423708; 458049, 2423751; 458049, 2423808; 458039, 2423854; 458066,

2423887; 458092, 2423928; 458096, 2423934; 458119, 2423970; 458122, 2423978; 458149, 2423997; 458162, 2424054; 458136, 2424097; 458136, 2424099; 458133, 2424118; 458126, 2424160; 458066, 2424167; 458043, 2424217; 458009, 2424240; 457966, 2424313; 457930, 2424340; 457853, 2424376; 457860, 2424406; 457833, 2424456; 457640, 2424596; 457594, 2424622; 457527, 2424612; 457504, 2424622; 457474, 2424636; 457421, 2424646; 457371, 2424652; 457358, 2424642; 457321, 2424612; 457298, 2424612; 457252, 2424591; 457238, 2424585; 457218, 2424576; 457204, 2424580; 457203, 2424580; 457195, 2424582; 457148, 2424589; 457099, 2424582; 457036, 2424556; 457019, 2424549; 457006, 2424540; 456924, 2424561; 456949, 2425099; 458411, 2425339; 458609, 2425269; 459268, 2425094; 459490, 2425148; 460208, 2425361; 460651, 2425063; 460662, 2424997; 460736, 2424562; 460732, 2424559; 460721, 2424548; 460705, 2424534; 460688, 2424518; 460619, 2424484; 460594, 2424517; 460594, 2424517; 460495, 2424517; 460475, 2424550; 460373, 2424536; 460281, 2424513; 460170, 2424523; 460066, 2424516; 459976, 2424546; 459929, 2424597; 459855, 2424638; 459740, 2424652; 459629, 2424638; 459499, 2424606; 459384, 2424532; 459286, 2424472; 459212, 2424315; 459157, 2424250; 459134, 2424204; 459105, 2424102; 459085, 2424072; 459037, 2423991; 458986, 2423894; 458939, 2423815; 458891, 2423732; 458854, 2423668; 458826, 2423618; 458786, 2423542; 458741, 2423531; 458744, 2423558; 458688, 2423585; 458658, 2423661; 458631, 2423661; 458551, 2423758; 458541, 2423798; 458512, 2423871; 458445, 2423921; 458405, 2423884; 458382, 2423834; 458335, 2423824; 458305, 2423771; 458295, 2423728; 458279, 2423668; 458315, 2423638; 458312, 2423581; 458199, 2423551; 458142, 2423478; return to starting point.

(B) Note: Map 23 follows:



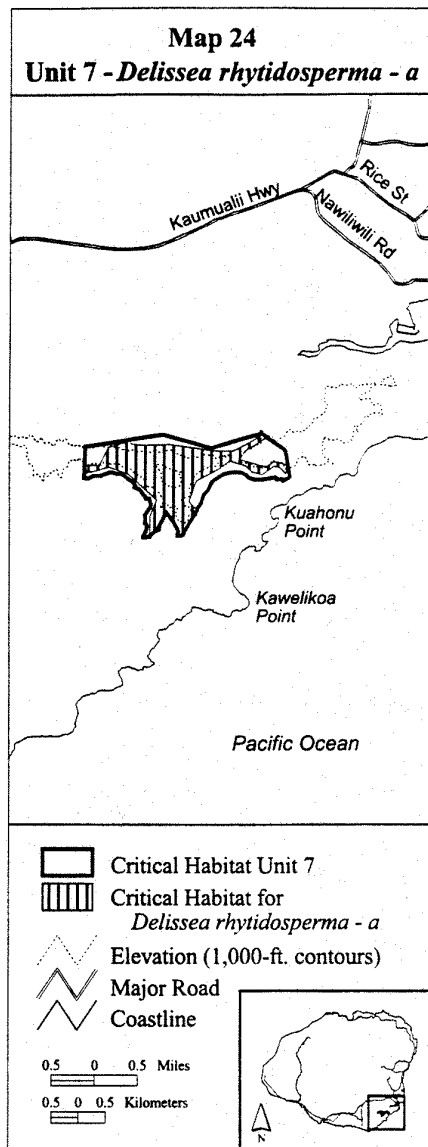


(xxiv) Kauai 7—*Delissea rhytidosperra*—a (221 ha; 545 ac)

(A) Unit consists of the following 53 boundary points: Start at 457776, 2425183; 457996, 2425162; 458503, 2425167; 459357, 2425044; 459695, 2425039; 459982, 2425193; 460156, 2425290; 460184, 2425357; 460210, 2425363; 460315, 2425300; 460202, 2425218; 460110, 2425157; 459890, 2425029; 459823, 2424886; 460294, 2424732; 460443, 2424844; 460683, 2424773; 460693, 2424691; 460663, 2424614; 460555, 2424732; 460443, 2424757; 460228, 2424599; 460038, 2424650; 459920, 2424768; 459634, 2424845; 459393, 2424691; 459009, 2424491; 458866, 2424113; 458958, 2423990; 459032, 2423977; 458955, 2423865; 458897, 2423775; 458840, 2423683; 458785, 2423540; 458756, 2423487; 458737, 2423478; 458661, 2423469; 458671, 2423560; 458523, 2423816; 458446, 2423913; 458293,

2423606; 458134, 2423468; 458139, 2423836; 458267, 2424138; 457955, 2424420; 457735, 2424620; 457371, 2424748; 457156, 2424676; 456952, 2424640; 456931, 2424789; 457197, 2424778; 457361, 2425116; 457765, 2425229; return to starting point.

(B) Note: Map 24 follows:

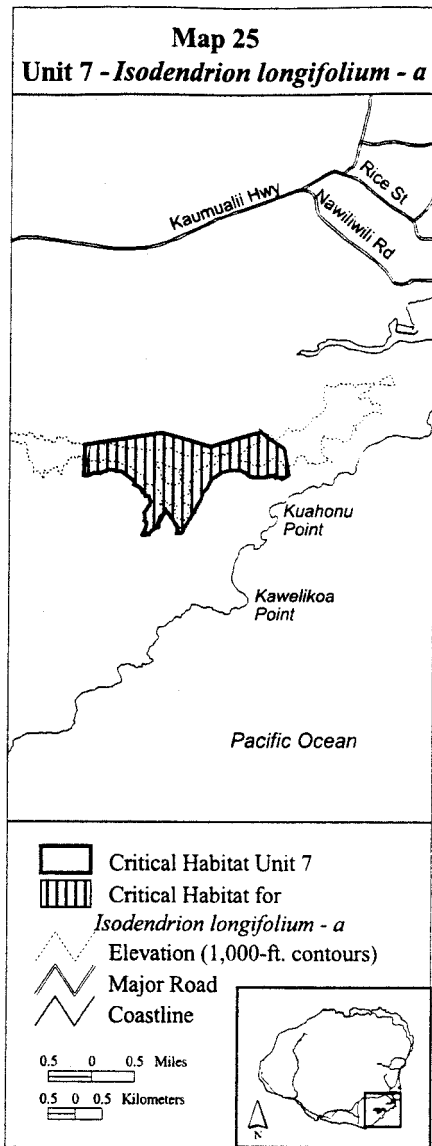


(xxv) Kauai 7—*Isodendron longifolium*—a (337 ha; 833 ac)

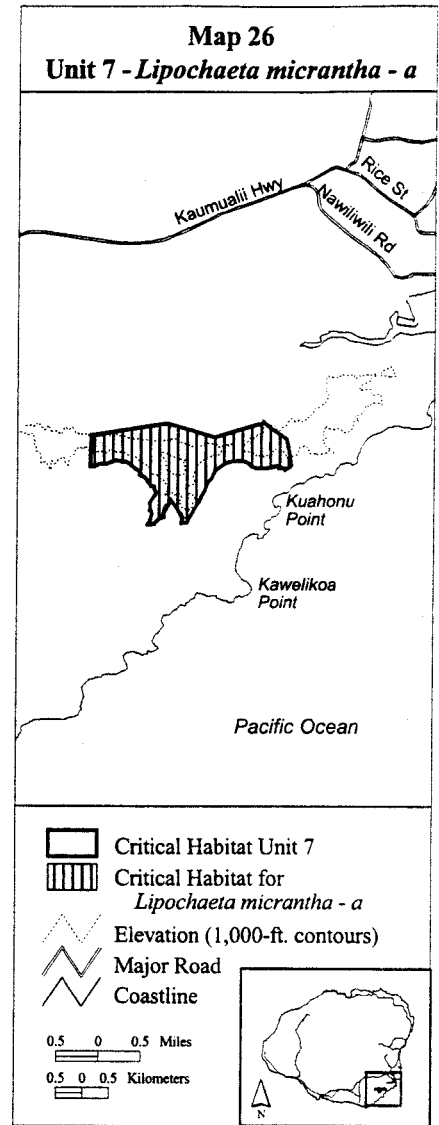
(A) Unit consists of the following 127 boundary points: Start at 456913, 2424541; 457040, 2425134; 457651, 2425234; 458371, 2425346; 459277, 2425049; 460211, 2425364; 460651, 2425063; 460662, 2424997; 460736, 2424562; 460732, 2424559; 460721, 2424548; 460705, 2424534; 460602, 2424507; 460593, 2424514; 460496, 2424516; 460475, 2424550; 460373, 2424536; 460281, 2424513; 460213, 2424515; 460213, 2424515; 460213, 2424515; 460209, 2424517; 460185,

2424518; 460184, 2424516; 460184, 2424516; 460184, 2424516; 460169, 2424516; 460068, 2424515; 459976, 2424546; 459929, 2424597; 459855, 2424638; 459740, 2424652; 459629, 2424638; 459499, 2424606; 459384, 2424532; 459286, 2424472; 459212, 2424315; 459157, 2424250; 459134, 2424204; 459105, 2424102; 459085, 2424072; 459037, 2423991; 458982, 2423888; 458939, 2423815; 458890, 2423741; 458869, 2423724; 458842, 2423663; 458811, 2423619; 458777, 2423544; 458741, 2423531; 458744, 2423558; 458688, 2423585; 458658, 2423661; 458631, 2423661; 458551, 2423758; 458541, 2423798; 458512, 2423871; 458445, 2423921; 458405, 2423884; 458382, 2423834; 458335, 2423824; 458305, 2423771; 458295, 2423728; 458279, 2423668; 458315, 2423638; 458312, 2423581; 458199, 2423551; 458142, 2423478; 458142, 2423455; 458117, 2423452; 458106, 2423450; 458058, 2423560; 458086, 2423655; 458073, 2423681; 458043, 2423708; 458049, 2423751; 458049, 2423808; 458039, 2423854; 458066, 2423887; 458092, 2423928; 458096, 2423934; 458119, 2423970; 458122, 2423978; 458149, 2423997; 458162, 2424054; 458136, 2424097; 458136, 2424099; 458133, 2424118; 458126, 2424160; 458066, 2424167; 458043, 2424217; 458009, 2424240; 457966, 2424313; 457930, 2424340; 457853, 2424376; 457860, 2424406; 457833, 2424456; 457640, 2424596; 457594, 2424622; 457527, 2424612; 457504, 2424622; 457474, 2424636; 457421, 2424646; 457371, 2424652; 457358, 2424642; 457321, 2424612; 457298, 2424612; 457252, 2424591; 457238, 2424585; 457218, 2424576; 457204, 2424580; 457203, 2424580; 457195, 2424582; 457148, 2424589; 457099, 2424582; 457036, 2424556; 457019, 2424549; 456995, 2424533; 456994, 2424532; 456986, 2424527; 456979, 2424529; 456977, 2424529; 456926, 2424539; 456919, 2424552; 456919, 2424552; 456919, 2424552; 456917, 2424541; return to starting point.

(B) Note: Map 25 follows:



2424072; 459037, 2423991; 458985, 2423890; 458939, 2423815; 458892, 2423732; 458852, 2423677; 458849, 2423670; 458825, 2423622; 458784, 2423557; 458741, 2423531; 458744, 2423558; 458688, 2423585; 458658, 2423661; 458631, 2423661; 458551, 2423758; 458541, 2423798; 458512, 2423871; 458445, 2423921; 458405, 2423884; 458382, 2423834; 458335, 2423824; 458305, 2423771; 458295, 2423728; 458279, 2423668; 458315, 2423638; 458312, 2423581; 458199, 2423551; 458142, 2423478; 458142, 2423455; 458117, 2423452; 458106, 2423450; 458074, 2423446; 458031, 2423441; 458021, 2423472; 458036, 2423485; 458058, 2423560; 458086, 2423655; 458073, 2423681; 458043, 2423708; 458049, 2423751; 458049, 2423808; 458039, 2423854; 458066, 2423887; 458092, 2423928; 458096, 2423934; 458119, 2423970; 458122, 2423978; 458149, 2423997; 458162, 2424054; 458136, 2424097; 458136, 2424099; 458133, 2424118; 458126, 2424160; 458066, 2424167; 458043, 2424217; 458009, 2424240; 457966, 2424313; 457930, 2424340; 457853, 2424376; 457860, 2424406; 457833, 2424456; 457640, 2424596; 457594, 2424622; 457527, 2424612; 457504, 2424622; 457474, 2424636; 457421, 2424646; 457371, 2424652; 457358, 2424642; 457321, 2424612; 457298, 2424612; 457252, 2424591; 457238, 2424585; 457218, 2424576; 457204, 2424580; 457203, 2424580; 457195, 2424582; 457148, 2424589; 457099, 2424582; 457036, 2424556; 457019, 2424549; 456995, 2424533; 456919, 2424552; 456919, 2424552; return to starting point.



(xxvii) Kauai 7—*Melicope haupeensis*—a (330 ha; 816 ac)

(B) Note: Map 26 follows:

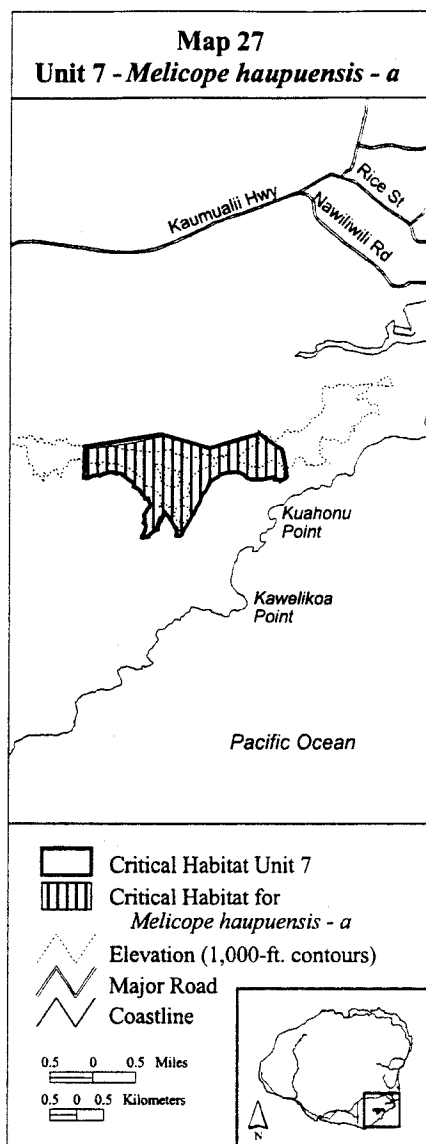
(A) Unit consists of the following 115 boundary points: Start at 456977, 2424529; 456957, 2425070; 457830, 2425189; 458432, 2425322; 458875, 2425201; 459283, 2425089; 459699, 2425210; 459897, 2425266; 460048, 2425310; 460143, 2425340; 460188, 2425357; 460207, 2425364; 460327, 2425282; 460590, 2425104; 460615, 2425036; 460721, 2424548; 460705, 2424534; 460688, 2424518; 460617, 2424483; 460594, 2424517; 460497, 2424515; 460475, 2424550; 460373, 2424536; 460284, 2424515; 460212, 2424516; 460209, 2424517; 460185, 2424518; 460184, 2424516; 460179, 2424516; 460114, 2424515; 460051, 2424519; 460009, 2424534; 459976, 2424546; 459929, 2424597; 459855, 2424638; 459740, 2424652; 459629, 2424638; 459499, 2424606; 459384, 2424532; 459286, 2424472; 459212, 2424315; 459157, 2424250; 459134, 2424204; 459105, 2424102; 459085,

(xxvi) Kauai 7—*Lipochaeta micrantha*—a (341 ha; 842 ac)

(A) Unit consists of the following 125 boundary points: Start at 456916, 2424553; 456952, 2425094; 458386, 2425333; 459277, 2425098; 459948, 2425284; 460206, 2425358; 460327, 2425282; 460590, 2425104; 460617, 2425086; 460649, 2425064; 460662, 2424997; 460736, 2424562; 460732, 2424559; 460721, 2424548; 460705, 2424534; 460688, 2424518; 460619, 2424484; 460594, 2424518; 460497, 2424515; 460475, 2424550; 460373, 2424536; 460281, 2424513; 460213, 2424515; 460209, 2424517; 460185, 2424518; 460184, 2424516; 460178, 2424516; 460073, 2424516; 459976, 2424546; 459929, 2424597; 459855, 2424638; 459740, 2424652; 459629, 2424638; 459499, 2424606; 459384, 2424532; 459286, 2424472; 459212, 2424315; 459157, 2424250; 459134, 2424204; 459105, 2424102; 459085,

2424204; 459105, 2424102; 459085, 2424072; 459037, 2423991; 458972, 2423889; 458939, 2423815; 458892, 2423732; 458845, 2423670; 458816, 2423623; 458792, 2423564; 458741, 2423531; 458744, 2423558; 458688, 2423585; 458658, 2423661; 458631, 2423661; 458551, 2423758; 458541, 2423798; 458512, 2423871; 458445, 2423921; 458405, 2423884; 458382, 2423834; 458335, 2423824; 458305, 2423771; 458295, 2423728; 458279, 2423668; 458315, 2423638; 458312, 2423581; 458199, 2423551; 458142, 2423478; 458142, 2423455; 458117, 2423452; 458106, 2423450; 458074, 2423446; 458042, 2423453; 458091, 2423660; 458086, 2423872; 458096, 2423934; 458119, 2423970; 458122, 2423978; 458149, 2423997; 458162, 2424054; 458136, 2424097; 458136, 2424099; 458133, 2424118; 458126, 2424160; 458066, 2424167; 458043, 2424217; 458009, 2424240; 457966, 2424313; 457930, 2424340; 457853, 2424376; 457860, 2424406; 457833, 2424456; 457640, 2424596; 457594, 2424622; 457527, 2424612; 457504, 2424622; 457474, 2424636; 457421, 2424646; 457371, 2424652; 457358, 2424642; 457321, 2424612; 457298, 2424612; 457252, 2424591; 457203, 2424580; 457195, 2424582; 457148, 2424589; 457099, 2424582; 457036, 2424556; 457019, 2424549; 456995, 2424533; 456994, 2424532; 456979, 2424529; return to starting point.

(B) Note: Map 27 follows:

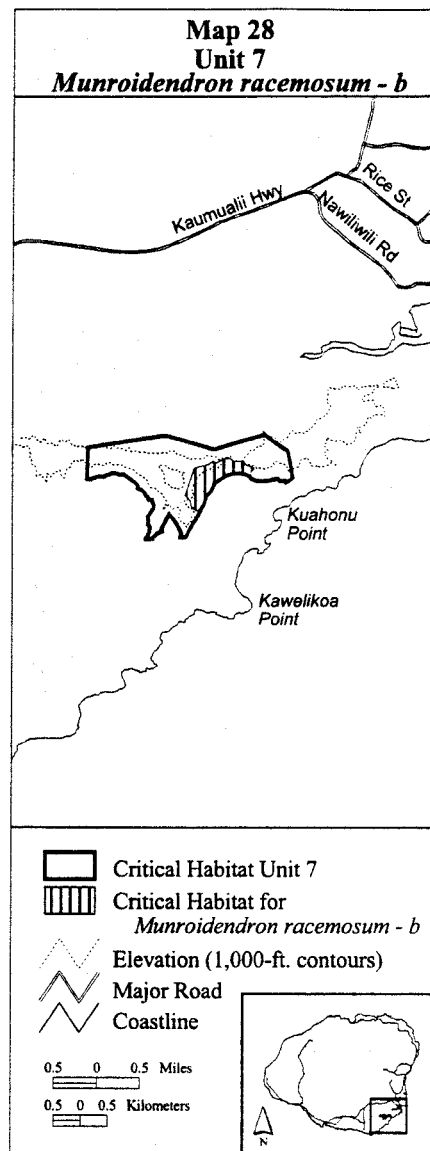


(xxviii) Kauai 7—*Munroidendron racemosum*—b (50 ha; 123 ac)

(A) Unit consists of the following 42 boundary points: Start at 460171, 2424516; 460070, 2424515; 459976, 2424546; 459929, 2424597; 459855, 2424638; 459740, 2424652; 459629, 2424638; 459499, 2424606; 459384, 2424532; 459286, 2424472; 459212, 2424315; 459157, 2424250; 459134, 2424204; 459105, 2424102; 459085, 2424072; 459037, 2423991; 459025, 2423961; 458943, 2423966; 458866, 2424034; 458846, 2424063; 458831, 2424156; 458744, 2424248; 458909, 2424734; 459045, 2424788; 459167, 2424803; 459201, 2424827; 459259, 2424875; 459327, 2424841; 459405, 2424890; 459507, 2424919; 459585, 2424919; 459643, 2424880; 459721, 2424875; 459838, 2424870; 459882, 2424802; 459964, 2424778; 460013, 2424759; 460023, 2424725; 459959, 2424666; 459964, 2424593; 460081,

2424530; 460149, 2424530; return to starting point.

(B) Note: Map 28 follows:

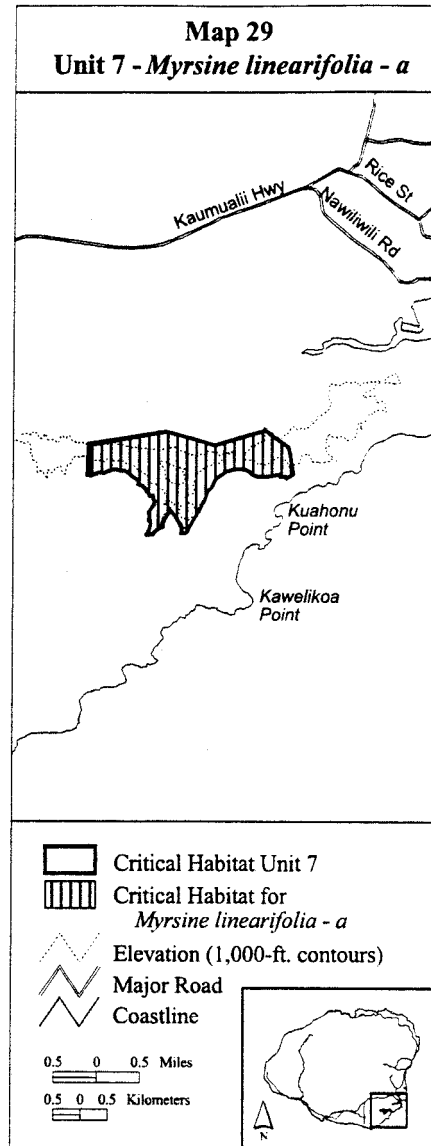


(xxix) Kauai 7—*Myrsine linearifolia*—a (334 ha; 826 ac)

(A) Unit consists of the following 109 boundary points: Start at 460009, 2424534; 459976, 2424546; 459929, 2424597; 459855, 2424638; 459740, 2424652; 459629, 2424638; 459499, 2424606; 459384, 2424532; 459286, 2424472; 459212, 2424315; 459157, 2424250; 459134, 2424204; 459105, 2424102; 459085, 2424072; 459037, 2423991; 458985, 2423890; 458939, 2423815; 458893, 2423731; 458860, 2423681; 458827, 2423624; 458787, 2423540; 458741, 2423531; 458744, 2423558; 458688, 2423585; 458658, 2423661; 458631, 2423661; 458551, 2423758; 458541, 2423798; 458512, 2423871; 458445, 2423921; 458405, 2423884; 458382, 2423834; 458335,

2423824; 458305, 2423771; 458295,  
 2423728; 458279, 2423668; 458315,  
 2423638; 458312, 2423581; 458199,  
 2423551; 458142, 2423478; 458142,  
 2423455; 458117, 2423452; 458056,  
 2423466; 458103, 2423665; 458082,  
 2423889; 458092, 2423928; 458096,  
 2423934; 458119, 2423970; 458122,  
 2423978; 458149, 2423997; 458162,  
 2424054; 458136, 2424097; 458136,  
 2424099; 458139, 2424114; 458133,  
 2424118; 458126, 2424160; 458056,  
 2424167; 458043, 2424217; 458009,  
 2424240; 457966, 2424313; 457930,  
 2424340; 457853, 2424376; 457860,  
 2424406; 457833, 2424456; 457640,  
 2424596; 457594, 2424622; 457527,  
 2424612; 457504, 2424622; 457474,  
 2424636; 457421, 2424646; 457371,  
 2424652; 457358, 2424642; 457321,  
 2424612; 457298, 2424612; 457252,  
 2424591; 457238, 2424585; 457204,  
 2424580; 457203, 2424580; 457195,  
 2424582; 457148, 2424589; 457099,  
 2424582; 457036, 2424556; 456975,  
 2424548; 456943, 2425070; 458384,  
 2425331; 459271, 2425086; 459894,  
 2425257; 460207, 2425364; 460327,  
 2425282; 460590, 2425104; 460617,  
 2425086; 460732, 2424559; 460721,  
 2424548; 460705, 2424534; 460688,  
 2424518; 460619, 2424484; 460594,  
 2424517; 460594, 2424517; 460495,  
 2424517; 460475, 2424550; 460373,  
 2424536; 460281, 2424513; 460213,  
 2424515; 460209, 2424517; 460185,  
 2424518; 460184, 2424516; 460176,  
 2424516; 460170, 2424523; 460118,  
 2424515; return to starting point.

(B) Note: Map 29 follows:

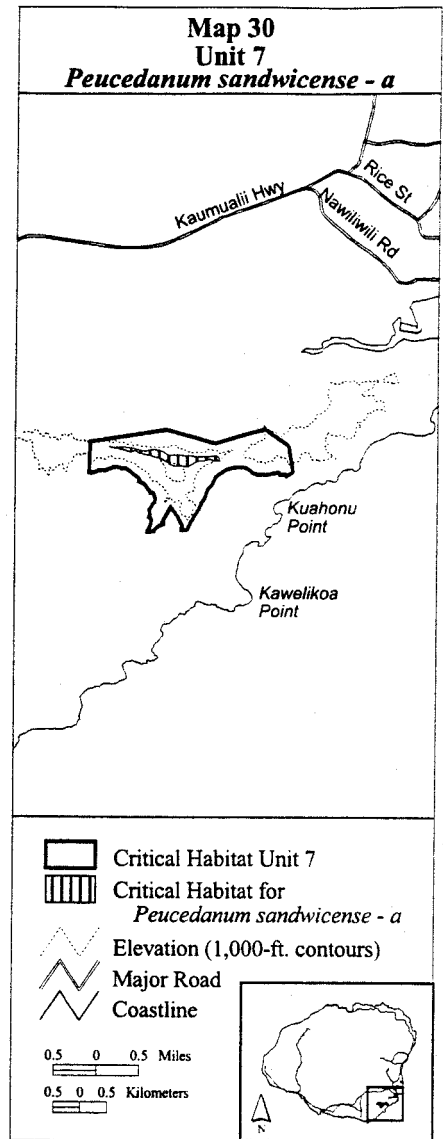


(xxx) Kauai 7—*Peucedanum sandwicense*—a (21 ha; 52 ac)

(A) Unit consists of the following 53 boundary points: Start at 457285, 2425044; 457378, 2425011; 457470, 2425024; 457559, 2425031; 457622, 2425008; 457671, 2425005; 457727, 2425005; 457806, 2424982; 457869, 2424952; 457961, 2424945; 458037, 2424958; 458110, 2424972; 458258, 2424958; 458301, 2424932; 458367, 2424889; 458417, 2424863; 458479, 2424866; 458568, 2424873; 458618, 2424876; 458680, 2424859; 458726, 2424853; 458789, 2424859; 458845, 2424853; 458888, 2424836; 458971, 2424836; 459043, 2424836; 459126, 2424836; 459182, 2424836; 459231, 2424853; 459304, 2424859; 459350, 2424823; 459353, 2424790; 459310, 2424764; 459251, 2424767; 459182, 2424797; 459060, 2424764; 458987, 2424764; 458888, 2424724; 458816, 2424681; 458756, 2424648; 458644,

2424671; 458499, 2424675; 458420, 2424698; 458360, 2424751; 458248, 2424803; 458050, 2424863; 457830, 2424909; 457787, 2424955; 457721, 2424949; 457691, 2424925; 457599, 2424958; 457421, 2425001; 457338, 2425005; return to starting point.

(B) Note: Map 30 follows:

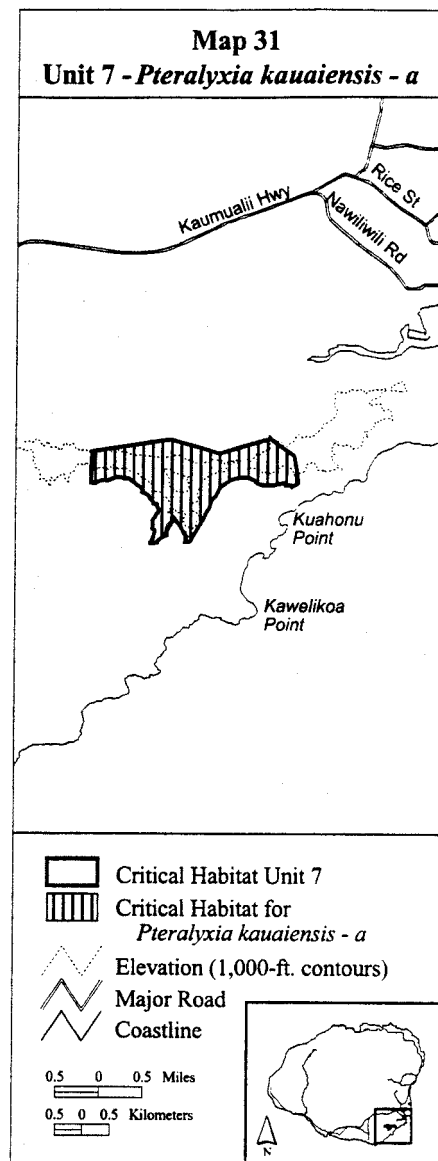


(xxxii) Kauai 7—*Pteralyxia kauaiensis*—a (346 ha; 854 ac)

(A) Unit consists of the following 149 boundary points: Start at 460212, 2424515; 460204, 2424515; 460183, 2424515; 460180, 2424516; 460074, 2424516; 460073, 2424516; 460066, 2424516; 460017, 2424532; 460009, 2424534; 459976, 2424546; 459929, 2424597; 459855, 2424638; 459740, 2424652; 459629, 2424638; 459499, 2424606; 459384, 2424532; 459286, 2424472; 459212, 2424315; 459157, 2424250; 459134, 2424204; 459105, 2424102; 459085, 2424072; 459037,

2423991; 458985, 2423890; 458939,  
 2423815; 458894, 2423737; 458893,  
 2423735; 458892, 2423732; 458890,  
 2423730; 458851, 2423668; 458827,  
 2423621; 458787, 2423543; 458741,  
 2423531; 458744, 2423558; 458688,  
 2423585; 458658, 2423661; 458631,  
 2423661; 458551, 2423758; 458541,  
 2423798; 458512, 2423871; 458445,  
 2423921; 458405, 2423884; 458382,  
 2423834; 458335, 2423824; 458305,  
 2423771; 458295, 2423728; 458279,  
 2423668; 458315, 2423638; 458312,  
 2423581; 458199, 2423551; 458142,  
 2423478; 458142, 2423455; 458117,  
 2423452; 458106, 2423450; 458074,  
 2423446; 458031, 2423441; 458029,  
 2423440; 458011, 2423438; 458009,  
 2423462; 458021, 2423472; 458021,  
 2423472; 458036, 2423485; 458058,  
 2423560; 458086, 2423655; 458073,  
 2423681; 458043, 2423708; 458049,  
 2423751; 458049, 2423808; 458039,  
 2423854; 458066, 2423887; 458092,  
 2423928; 458096, 2423934; 458119,  
 2423970; 458122, 2423978; 458149,  
 2423997; 458162, 2424054; 458136,  
 2424097; 458136, 2424099; 458133,  
 2424118; 458126, 2424160; 458066,  
 2424167; 458043, 2424217; 458009,  
 2424240; 457966, 2424313; 457930,  
 2424340; 457853, 2424376; 457860,  
 2424406; 457833, 2424456; 457640,  
 2424596; 457594, 2424622; 457527,  
 2424612; 457504, 2424622; 457474,  
 2424636; 457421, 2424646; 457371,  
 2424652; 457358, 2424642; 457321,  
 2424612; 457298, 2424612; 457252,  
 2424591; 457238, 2424585; 457218,  
 2424576; 457204, 2424580; 457203,  
 2424580; 457195, 2424582; 457148,  
 2424589; 457099, 2424582; 457036,  
 2424556; 457019, 2424549; 456995,  
 2424533; 456994, 2424532; 456986,  
 2424527; 456979, 2424529; 456977,  
 2424529; 456926, 2424539; 456919,  
 2424552; 456919, 2424552; 456919,  
 2424552; 456917, 2424541; 456913,  
 2424541; 456912, 2424542; 456911,  
 2424542; 456922, 2424860; 456931,  
 2425122; 456931, 2425122; 458355,  
 2425346; 458360, 2425344; 458369,  
 2425346; 458371, 2425346; 458372,  
 2425346; 459274, 2425092; 460209,  
 2425362; 460217, 2425356; 460218,  
 2425356; 460651, 2425063; 460662,  
 2424997; 460736, 2424562; 460732,  
 2424559; 460721, 2424548; 460705,  
 2424534; 460688, 2424518; 460619,  
 2424484; 460596, 2424515; 460497,  
 2424515; 460495, 2424517; 460495,  
 2424517; 460475, 2424550; 460373,  
 2424536; 460281, 2424513; 460214,  
 2424515; return to starting point.

(B) Note: Map 31 follows:

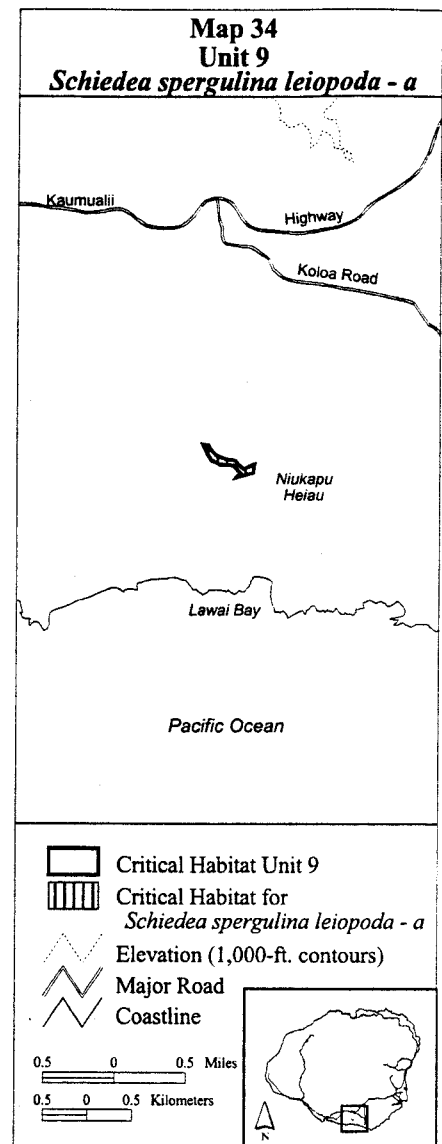
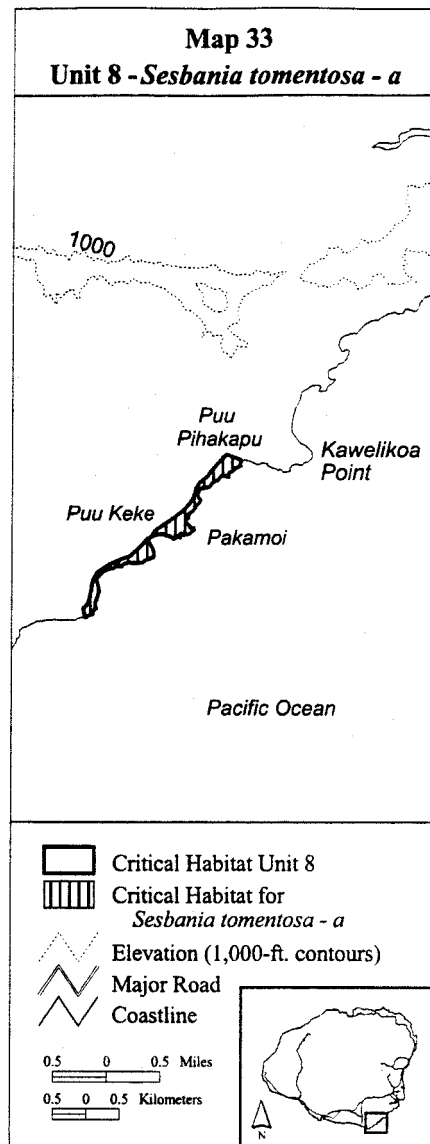
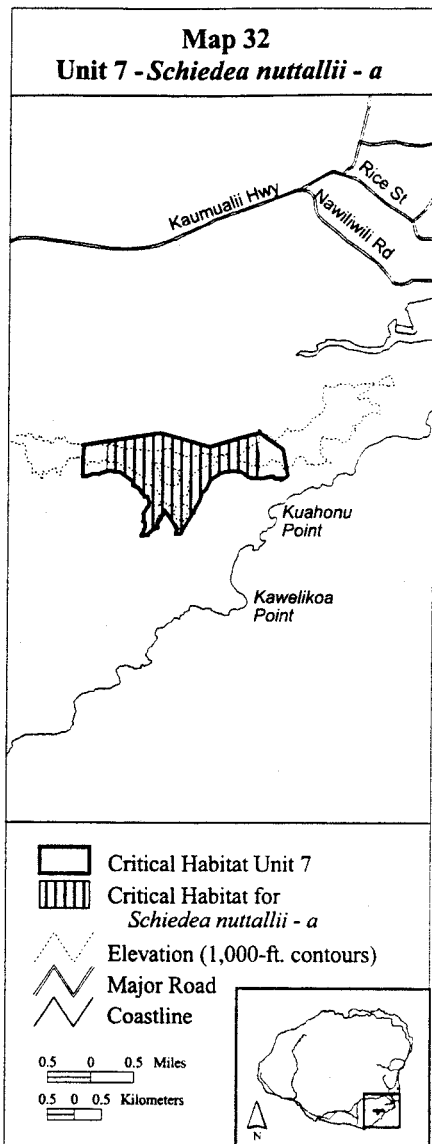


2423551; 458142, 2423478; 458142,  
 2423455; 458117, 2423452; 458106,  
 2423450; 458074, 2423446; 458031,  
 2423441; 458029, 2423440; 458021,  
 2423472; 458036, 2423485; 458058,  
 2423560; 458086, 2423655; 458073,  
 2423681; 458043, 2423708; 458049,  
 2423751; 458049, 2423808; 458039,  
 2423854; 458066, 2423887; 458092,  
 2423928; 458096, 2423934; 458119,  
 2423970; 458122, 2423978; 458149,  
 2423997; 458162, 2424054; 458136,  
 2424097; 458136, 2424099; 458133,  
 2424118; 458126, 2424160; 458066,  
 2424167; 458043, 2424217; 458009,  
 2424240; 457966, 2424313; 457930,  
 2424340; 457853, 2424376; 457860,  
 2424406; 457833, 2424456; 457640,  
 2424596; 457594, 2424622; 457527,  
 2424612; 457504, 2424622; 457474,  
 2424636; 457421, 2424646; 457371,  
 2424652; 457358, 2424642; 457377,  
 2425117; 457456, 2425204; 457651,  
 2425234; 458369, 2425346; 459306,  
 2425071; 460130, 2425340; 460207,  
 2424964; 460176, 2424516; 460170,  
 2424523; 460118, 2424515; 460074,  
 2424516; return to starting point.

(B) Note: Map 32 follows:

(xxxii) Kauai 7—*Schiedea nuttallii*—a  
 (282 ha; 697 ac)

(A) Unit consists of the following 93  
 boundary points: Start at 460009,  
 2424534; 459976, 2424546; 459929,  
 2424597; 459855, 2424638; 459740,  
 2424652; 459629, 2424638; 459499,  
 2424606; 459384, 2424532; 459286,  
 2424472; 459212, 2424315; 459157,  
 2424250; 459134, 2424204; 459105,  
 2424102; 459085, 2424072; 459037,  
 2423991; 458985, 2423890; 458939,  
 2423815; 458893, 2423731; 458860,  
 2423681; 458827, 2423624; 458787,  
 2423540; 458741, 2423531; 458744,  
 2423558; 458688, 2423585; 458658,  
 2423661; 458631, 2423661; 458551,  
 2423758; 458541, 2423798; 458512,  
 2423871; 458445, 2423921; 458405,  
 2423884; 458382, 2423834; 458335,  
 2423824; 458305, 2423771; 458295,  
 2423728; 458279, 2423668; 458315,  
 2423638; 458312, 2423581; 458199,



(xxxiii) Kauai 8—*Sesbania tomentosa*—a (47 ha; 117 ac)

(A) Unit consists of the following 26 boundary points: coastline; 458938, 2422136; 456613, 2419801; 456582, 2419934; 456653, 2420011; 456705, 2420236; 456722, 2420354; 456790, 2420479; 456952, 2420581; 457154, 2420676; 457284, 2420717; 457481, 2420921; 457534, 2420977; 457598, 2421003; 457649, 2421080; 457665, 2421106; 457862, 2421239; 458083, 2421412; 458182, 2421516; 458226, 2421605; 458262, 2421722; 458324, 2421821; 458434, 2421911; 458499, 2422001; 458665, 2422178; 458720, 2422231; 458912, 2422161; coastline.

(B) Note: Map 33 follows:

(xxxiv) Kauai 9—*Schiedea spergulina* var. *leiopoda*—a (5 ha; 11 ac)

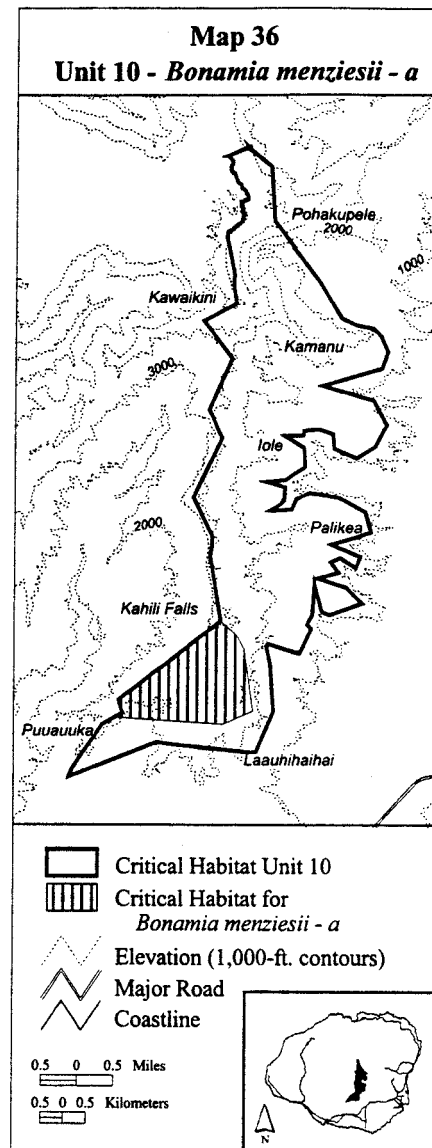
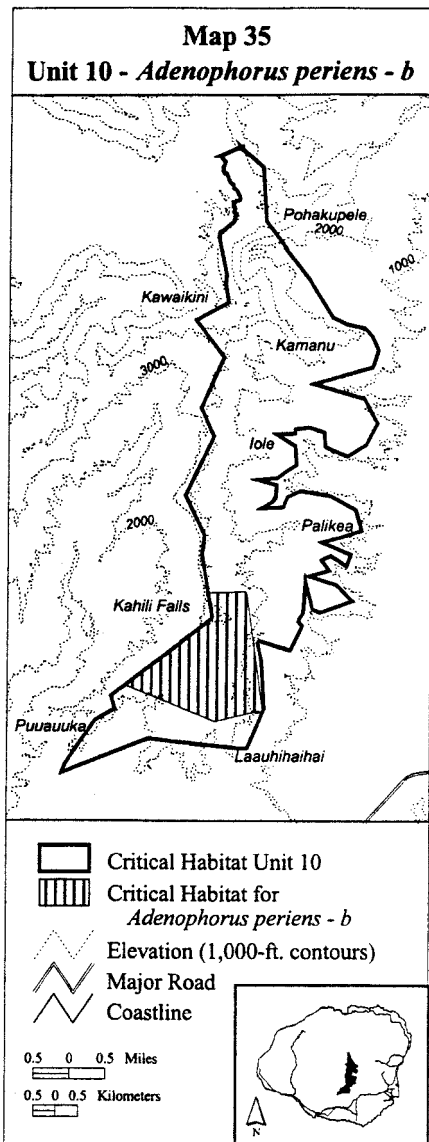
(A) Unit consists of the following 23 boundary points: Start at 447953, 2421713; 447951, 2421694; 447757, 2421647; 447804, 2421699; 447721, 2421781; 447613, 2421788; 447569, 2421791; 447544, 2421803; 447473, 2421836; 447445, 2421889; 447380, 2422014; 447420, 2422010; 447443, 2422008; 447482, 2421943; 447527, 2421894; 447574, 2421872; 447636, 2421848; 447702, 2421846; 447752, 2421830; 447806, 2421767; 447843, 2421739; 447843, 2421739; 447961, 2421793; return to starting point.

(B) Note: Map 34 follows:

(xxxv) Kauai 10—*Adenophorus periens*—b (491 ha; 1,215 ac)

(A) Unit consists of the following 13 boundary points: Start at 448417, 2432669; 449262, 2432700; 449291, 2432590; 449659, 2430034; 449634, 2429983; 449569, 2430034; 448593, 2429793; 446563, 2430607; 447808, 2431562; 448023, 2431693; 448011, 2431718; 448515, 2432105; 448503, 2432172; return to starting point.

(B) Note: Map 35 follows:



2433481; 449449, 2433495; 449345, 2433287; 449613, 2433139; 449420, 2432961; 450088, 2432589; 448840, 2432604; 448677, 2432872; 448706, 2433154; 448736, 2433421; 448692, 2433629; 448677, 2434030; 448706, 2434461; 448543, 2434654; 448662, 2434921; 448394, 2434743; 448380, 2435189; 448617, 2435427; 448781, 2435753; 448825, 2436169; 448647, 2436630; 448544, 2437006; 448458, 2437328; 448714, 2437911; 448825, 2438056; 448840, 2438160; 449137, 2438219; 449330, 2438605; 449613, 2438679; 449712, 2439392; 449522, 2439625; 449191, 2439915; 449211, 2440336; 449375, 2440536; 449671, 2440580; 449971, 2440270; 449870, 2440076; 449899, 2440063; 450011, 2440098; 450059, 2440101; 450106, 2440129; 450147, 2440093; 450162, 2440075; 450162, 2440075; 450185, 2440030; 450190, 2440016; 450203, 2439969; 450175, 2439897; 450247, 2439815; 450203, 2439630; 450115, 2439486; 450071, 2439407; 450084, 2439338; 450175, 2439294; 450238, 2439250; 450252, 2439220; 450237, 2439156; 450297, 2439075; 450379, 2439062; 450463, 2438924; 450671, 2438949; 450714, 2438836; 450940, 2438833; return to starting point.

(B) Note: Map 37 follows:

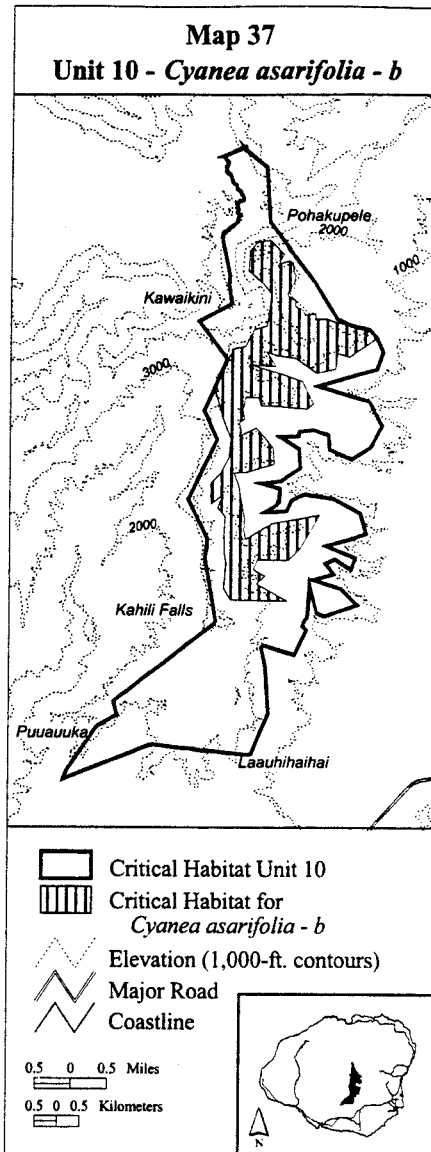
(xxxvi) Kauai 10—*Bonamia menziesii*—a (421 ha; 1,039 ac)

(A) Unit consists of the following 8 boundary points: Start at 448513, 2432103; 448882, 2431783; 449031, 2431495; 449240, 2430109; 448586, 2429812; 446148, 2429968; 446327, 2430072; 446237, 2430356; return to starting point.

(B) Note: Map 36 follows:

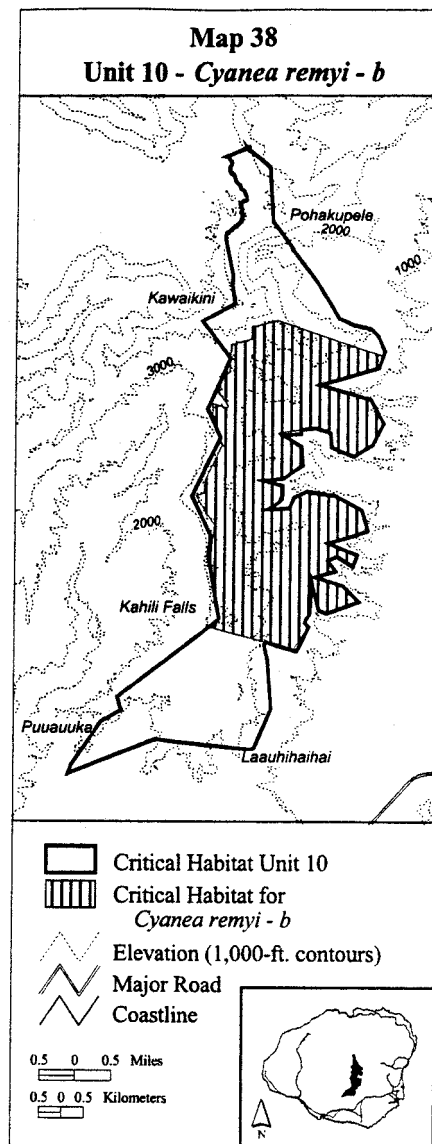
(xxxvii) Kauai 10—*Cyanea asarifolia*—b (903 ha; 2,232 ac)

(A) Unit consists of the following 103 boundary points: Start at 451083, 2438783; 451901, 2438605; 452064, 2438426; 451856, 2438263; 451455, 2437996; 451187, 2438070; 451143, 2437728; 450727, 2437639; 450252, 2437966; 449850, 2438026; 449613, 2438100; 449806, 2437788; 449271, 2437818; 449925, 2437625; 450415, 2437446; 450653, 2436956; 450519, 2436837; 449776, 2436897; 449494, 2436897; 449449, 2437090; 449152, 2437105; 449093, 2436808; 449122, 2436615; 449018, 2436541; 449063, 2436318; 449018, 2436229; 449390, 2436422; 449628, 2436125; 449761, 2435976; 449791, 2435605; 449167, 2435427; 448900, 2435412; 449018, 2435115; 449078, 2434773; 449137, 2434416; 449122, 2434149; 449167, 2433956; 449761, 2434298; 450816, 2434491; 450400, 2433763; 450118,



2435952; 450367, 2435514; 449908, 2435222; 449490, 2435201; 449929, 2435075; 449908, 2434825; 449845, 2434700; 449595, 2434554; 450075, 2434575; 450179, 2434804; 450471, 2434950; 451118, 2434846; 451723, 2434533; 451848, 2434074; 451431, 2433928; 450972, 2433803; 451619, 2433532; 451514, 2433281; 451160, 2433511; 450951, 2433406; 451139, 2433177; 450680, 2433052; 451285, 2432864; 451660, 2432488; 450930, 2432238; 450763, 2432322; 450596, 2432927; 450555, 2432217; 450429, 2432050; 450533, 2431929; 450459, 2431769; 450429, 2431800; 450200, 2431445; return to starting point.

(B) Note: Map 38 follows:

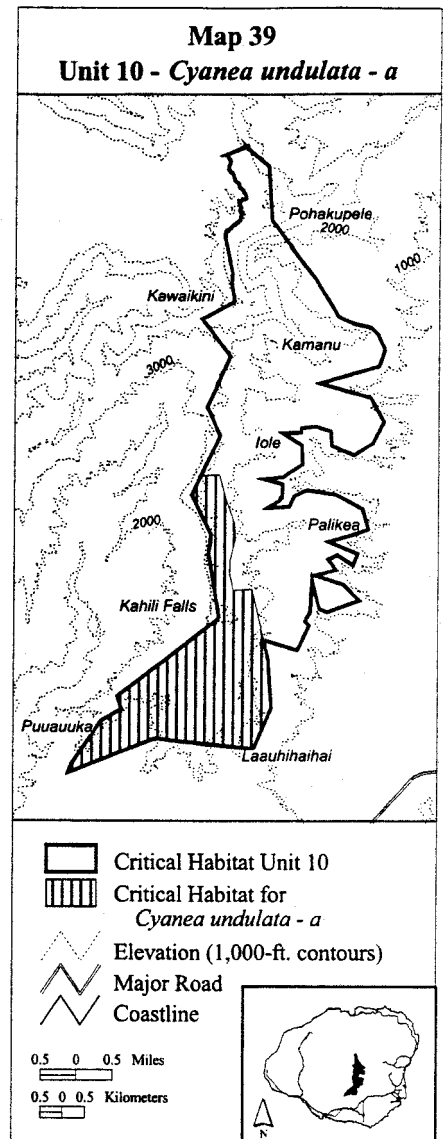


(xxxix) Kauai 10—*Cyanea undulata*—a (1,005 ha; 2,484 ac)

(A) Unit consists of the following 28 boundary points: Start at 448088, 2435267; 448504, 2435281; 448661,

2434734; 448844, 2434201; 448877, 2433868; 448746, 2433374; 448740, 2433286; 448740, 2433060; 448779, 2432916; 448823, 2432729; 449256, 2432753; 449617, 2431161; 449696, 2430088; 449318, 2429191; 447115, 2429408; 447101, 2429410; 447100, 2429410; 447092, 2429411; 445133, 2428627; 445203, 2428817; 445869, 2429806; 446327, 2430072; 446237, 2430356; 448515, 2432105; 448503, 2432172; 448267, 2433542; 448319, 2433974; 447886, 2434845; return to starting point.

(B) Note: Map 39 follows:



(xl) Kauai 10—*Cyrtandra limahuliensis*—c (2,013 ha; 4,975 ac)

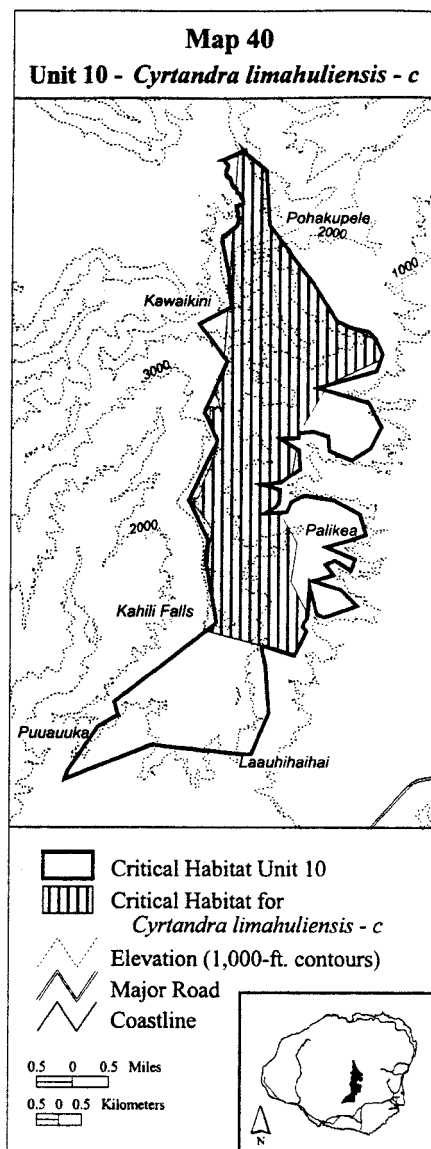
(A) Unit consists of the following 172 boundary points: Start at 450986, 2437413; 450763, 2437349; 450920, 2437303; 450356, 2436356; 450332, 2436229; 449924, 2436215; 450288, 2435988; 450188, 2435455; 450167,



2435387; 450091, 2435338; 449939, 2435224; 449909, 2435222; 449908, 2435222; 449889, 2435221; 449520, 2435192; 449929, 2435075; 449908, 2434825; 449890, 2434790; 449906, 2434762; 449866, 2434742; 449845, 2434700; 449602, 2434558; 449641, 2434556; 449926, 2434568; 450308, 2433891; 450180, 2433045; 450561, 2432319; 450555, 2432217; 450489, 2432130; 450442, 2432036; 450533, 2431929; 450364, 2431564; 450270, 2431394; 449620, 2431593; 449428, 2431642; 448291, 2431933; 448515, 2432105; 448503, 2432172; 448417, 2432669; 448308, 2433302; 448343, 2433782; 448405, 2434199; 448223, 2434468; 447893, 2434860; 447894, 2434861; 448013, 2434861; 448101, 2434891; 448168, 2435077; 448176, 2435180; 448299, 2435441; 448519, 2436050; 448518, 2436082; 448503, 2436133; 448515, 2436159; 448453, 2436296; 448343, 2436661; 448343, 2436932; 448488, 2436884; 448486, 2436941; 448585, 2436875; 448512, 2437111; 448489, 2437141; 448480, 2437211; 448450, 2437310; 448728, 2437943; 448662, 2438032; 448728, 2439126; 448819, 2439175; 448756, 2439586; 448770, 2439804; 448837, 2440912; 448841, 2440914; 448861, 2440927; 448877, 2440939; 448918, 2440982; 448940, 2441006; 448941, 2441024; 448943, 2441044; 448943, 2441053; 448943, 2441063; 448944, 2441075; 448948, 2441084; 448954, 2441097; 448964, 2441109; 448969, 2441116; 448971, 2441119; 448972, 2441136; 448973, 2441143; 448972, 2441150; 448967, 2441159; 448961, 2441163; 448949, 2441170; 448941, 2441177; 448933, 2441184; 448930, 2441194; 448926, 2441212; 448934, 2441230; 448940, 2441238; 448944, 2441250; 448946, 2441259; 448948, 2441264; 448948, 2441273; 448948, 2441281; 448944, 2441291; 448935, 2441302; 448928, 2441313; 448925, 2441322; 448920, 2441333; 448919, 2441341; 448917, 2441357; 448916, 2441369; 448918, 2441381; 448922, 2441392; 448930, 2441400; 448936, 2441403; 448940, 2441404; 448945, 2441411; 448948, 2441420; 448952, 2441427; 448964, 2441441; 448971, 2441443; 449003, 2441449; 449032, 2441461; 449040, 2441466; 449049, 2441471; 449053, 2441472; 449060, 2441481; 449064, 2441492; 449065, 2441502; 449066, 2441511; 449061, 2441528; 449050, 2441561; 449046, 2441569; 449043, 2441578; 449037, 2441588; 449030, 2441595; 449017, 2441611; 449012, 2441616; 449009, 2441625; 449006, 2441639; 449004, 2441650; 449000, 2441660; 448995, 2441668; 448986, 2441677; 448972,

2441689; 448957, 2441700; 448939, 2441710; 448933, 2441715; 448925, 2441722; 448915, 2441738; 448913, 2441753; 448914, 2441760; 448913, 2441774; 448915, 2441796; 448910, 2441807; 448900, 2441814; 448892, 2441817; 448898, 2441915; 448939, 2442579; 449163, 2442553; 449589, 2442203; 449662, 2441006; 449663, 2440988; 450101, 2440409; 450094, 2440396; 450653, 2439686; 451170, 2438845; 452064, 2438419; 452203, 2438108; 452189, 2438063; 452160, 2437988; 451002, 2437441; return to starting point.

(B) Note: Map 40 follows:

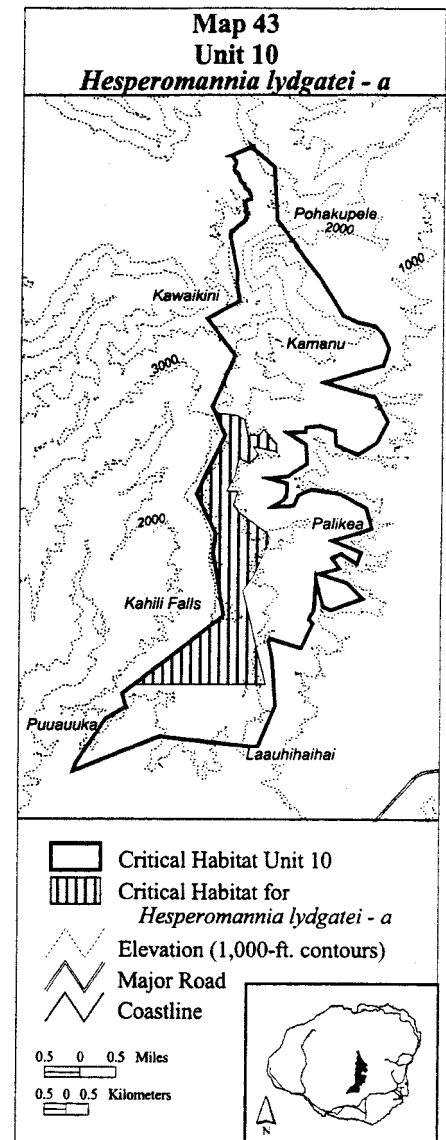
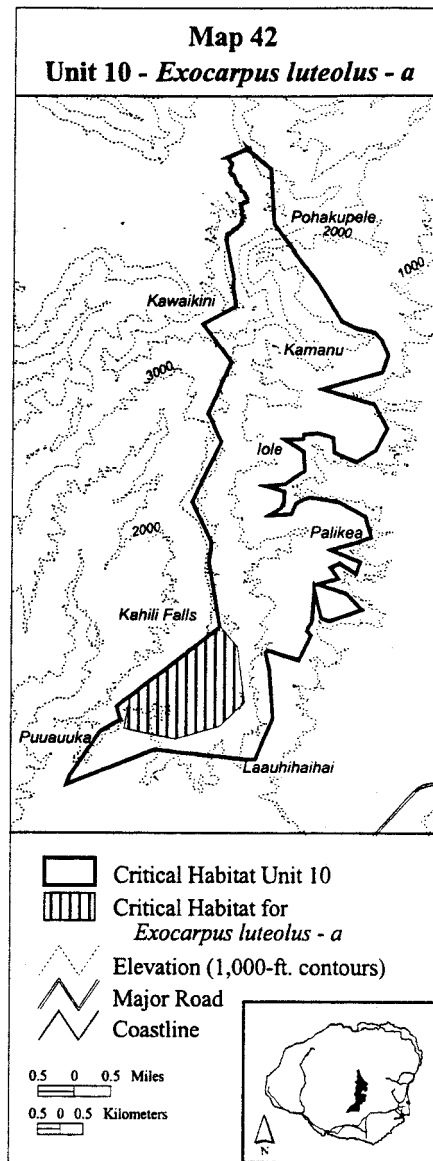
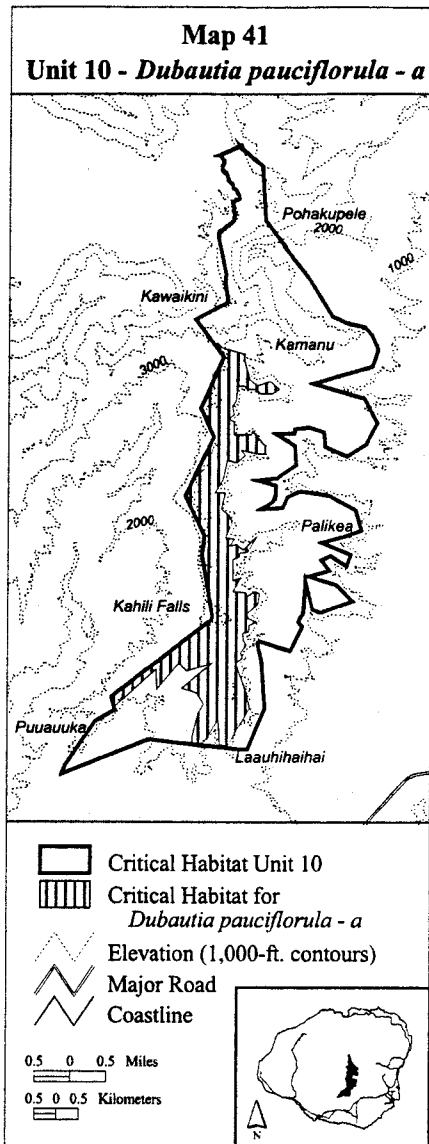


2437392; 449987, 2437214; 449808, 2437114; 449570, 2437114; 449451, 2437214; 449273, 2437214; 449174, 2437313; 449054, 2437273; 449015, 2436936; 448935, 2436857; 448975, 2436658; 448856, 2436559; 448975, 2436500; 448975, 2436202; 449372, 2436202; 449392, 2436281; 449669, 2435944; 449669, 2435766; 449550, 2435766; 449134, 2435865; 449233, 2435746; 449035, 2435567; 448816, 2435627; 448737, 2435191; 448559, 2434913; 448777, 2434913; 448697, 2434556; 448876, 2434417; 448935, 2434219; 448797, 2433921; 448995, 2433881; 448896, 2433723; 449055, 2433762; 449193, 2433643; 449511, 2433941; 449293, 2433584; 449114, 2433564; 449114, 2433485; 448955, 2433405; 448975, 2433167; 448955, 2432949; 449154, 2433009; 448975, 2432711; 449253, 2432691; 449273, 2432592; 449451, 2432711; 449570, 2432671; 449531, 2432414; 449273, 2432215; 449312, 2432116; 449511, 2432037; 449332, 2431957; 449332, 2431819; 449193, 2431779; 449213, 2431600; 449273, 2431521; 449154, 2431342; 449193, 2431223; 449035, 2431104; 449154, 2430787; 449273, 2430450; 449352, 2430093; 448856, 2429259; 448678, 2429299; 448658, 2429855; 448283, 2429271; 448109, 2429291; 448055, 2429297; 448063, 2429438; 448201, 2429974; 448320, 2430192; 448162, 2430450; 447825, 2430549; 448499, 2431104; 447944, 2430926; 447765, 2431104; 447269, 2430529; 447249, 2430966; 446310, 2430125; 446237, 2430356; 448515, 2432105; 448503, 2432172; 448267, 2433542; 448319, 2433974; 447886, 2434845; 448515, 2436159; 448226, 2436801; 448728, 2437943; 448612, 2438099; 448598, 2438245; return to starting point.

(B) Note: Map 41 follows:

(xli) Kauai 10—*Dubautia pauciflora*—a (814 ha; 2,012 ac)

(A) Unit consists of the following 96 boundary points: Start at 448697, 2438146; 449173, 2438007; 449213, 2437809; 449273, 2437571; 449312, 2437432; 449491, 2437293; 449788,



(xlii) Kauai 10—*Exocarpus luteolus*—a (401 ha; 991 ac)

(A) Unit consists of the following 10 boundary points: Start at 448504, 2432168; 448908, 2431685; 449077, 2430445; 448532, 2429929; 447543, 2429635; 446414, 2429881; 446462, 2430141; 446530, 2430532; 446530, 2430581; 448515, 2432105; return to starting point.

(B) Note: Map 42 follows:

(xliii) Kauai 10—*Hesperomannia lydgatei*—a (646 ha; 1,596 ac)

(A) Unit consists of the following 29 boundary points: Start at 448286, 2436668; 448802, 2436599; 448953, 2436524; 449029, 2436158; 449294, 2436158; 449395, 2436284; 449672, 2435981; 449672, 2435780; 449155, 2435893; 449281, 2435704; 449067, 2435527; 448840, 2435641; 448751, 2435237; 448562, 2434909; 448827, 2434897; 448713, 2434594; 448877, 2434417; 449496, 2433951; 449559, 2433825; 449193, 2433005; 448953, 2432677; 449466, 2430577; 446508, 2430564; 448515, 2432105; 448503, 2432172; 448267, 2433542; 448319, 2433974; 447886, 2434845; 448515, 2436159; return to starting point.

(B) Note: Map 43 follows:

(xliv) Kauai 10—*Isodendron longifolium*—b (142 ha; 350 ac)

(A) Unit consists of the following 14 boundary points: Start at 448057, 2430921; 448043, 2430923; 447940, 2430853; 447794, 2430722; 447574, 2430543; 447170, 2430191; 446888, 2429999; 446635, 2429933; 446414, 2429985; 446295, 2430053; 446327, 2430072; 446237, 2430356; 448077, 2431769; 448127, 2431466; return to starting point.

(B) Note: Map 44 follows: