DESERT WILDLIFE

Every year thousands of soldiers journey to the National Training Center, Fort Irwin, CA to train. Many soldiers have an interest in the wide variety of wildlife that they may or may not see. Most of the wildlife here in the desert is nocturnal. During the day you will probably see your usual squirrels, birds and reptiles. But as night falls there is a much larger variety. Desert animals and insects are unique because of the extreme heat and aridity that they endure. This section cannot really be used as guide to identify animals but more of an awareness section, to let you know what is out there.

MAMMALS:

Mammals, including humans, are susceptible to the disease rabies that is caused by a virus, which affects the central nervous system. The disease can only be transmitted to man by the bite of a rabid animal, or through the saliva of a rabid animal being introduced into a fresh scratch or similar break in the skin. The species most likely encountered in our desert that may be rabies infected are bats, dogs, coyotes, foxes, ground squirrels, and possibly badgers. If an animal shows absolutely no fear of man it could possibly be suffering from rabies, however, not all animals that fail to run from man are rabid.

Tularemia, also known as the "Rabbit Disease", is an acute infectious disease caused by a bacteria. The disease is primarily one of wild animals; human infections are only incidental. It occurs naturally in at least 48 species of birds and mammals. In the United States the rabbit is the most important source of human infection (90 percent of the cases). The bacteria are also found in muskrats, beavers, and the deerfly and in some hard ticks. Infection is primarily transmitted to humans by handling or ingestion of insufficiently cooked rabbit or hares meat; by drinking contaminated water, or by inhalation of dust from contaminated soil, grain or hay. Using impervious gloves when skinning or handling animals, especially rabbits and ensuring that the meat of wild rabbit and rodents is cooked thoroughly can prevent transmission of the disease.

Do not handle sick animals including domestic dogs and cats. If bitten or scratched by any animal, immediately and thoroughly wash the wound with soap and water and report to a physician.

BATS

A Big Brown Bat

There are several bat species here on Fort Irwin. One species, the pallid bat is on the California list of "species of a special concern." Abandon mines and other locations, which could be habitats for bats, have been designated "off limits." Bats have also been observed on Post near the sewage pond, springs, and pools of water, rocky canyons and boulder outcrops. Bats should not be killed. They eat large quantities of insects and act as one of nature's pest controllers. Live and dead bats should not be handled because they can carry the virus that causes rabies.

COYOTE

The coyote is grizzled gray in color. He has yellowish legs with a dark vertical line on the lower forelegs. The tail is bushy with a black tip and the ears are prominent. Coyotes are most often heard at dusk, dawn or during the right. Their voice consists of a series of barks and yelps followed by a prolonged howl.

Coyotes adapt well to the ever-changing environment of Fort Irwin. They have fairly large home ranges and have been seen roaming through even the busiest parts of Post. Because of their adaptability coyotes are beginning to be a problem in the housing area. They have found an easy food supply in the refuse and domestic cats and dogs. Coyotes are not dangerous unless rabid.

BOBCATS

Nocturnal and very shy it is rare that a Bobcat will be seen. However there is a relatively large number on Fort Irwin as determined by their scat. Bobcats lie during the day in rock clefts or other hiding places. They prey on rabbits, mice, and squirrels. Their scream is very piercing and when threatened, it utters short sudden "cough-barks." The bobcat is a tawny color with indistinct black spots. The tail is short and stubby with two or three black bars and a black tip on top, and white below. The upper legs also have dark bars. Thin, black lines on the face radiate into a broad cheek ruff. The ears are slightly tufted.

Bobcats have been seen at the sewage ponds where common reed and thickets provide dense cover and an abundance of food. Bobcats are also abundant in Goldstone along the boundaries of the Post where there is less noise and disturbance.

KIT FOXES

Kit Foxes are similar to bobcats, nocturnal and shy. Sightings are rare. Their burrows and scat verify presence. The kit fox prefer quiet less disturbed areas but can occasionally be found in heavily disturbed areas.

MOJAVE GROUND SQUIRREL

The Mojave ground squirrel was found to be most abundant at sites with saltbush, at Goldstone Lake, and at an area near Goddard Road. In the past the Mojave ground squirrel was a state-threatened species with Fort Irwin in the northeastern extreme of its habitat.

RODENTS:

MERRIAM KANGAROO RAT

These are the smallest kangaroo rats in the United States. They are light yellowish on the top and white below. Their long tail has white side stripes that are wider than dark stripes. The end of the tail is tufted. This kangaroo rat has dark line on either side of its nose. Merriam's kangaroo rats feed mostly on seeds, especially of the mesquite, creosote bush, and ocotillo. They generally live in the creosote bush desert scrub area.

PANAMINT KANGAROO RAT

The Panamint kangaroo rat was found to be extremely abundant in areas of high shrub cover and at all study sites in the Granite Mountains.

GREAT BASIN KANGAROO RAT (CHISELED-TOOTHED KANGAROO RAT)

The Great Basin kangaroo rat is never very abundant because it is at the southwestern portion of its range. This species seems to prefer a habitat of saltbush scrub although it has been found in smaller numbers at an area just east of Goldstone and in the Granite Mountains.

DESERT KANGAROO RAT

The Desert kangaroo rat is primarily a sand dune dweller in sand dune areas and eolian sandy deposits around playas. They have been found to be abundant on the dunes west of the Bitter Springs area on the southeastern portion of Fort Irwin, north of "The Whale."

LITTLE POCKET MOUSE

The Little pocket mouse is the most widespread species of pocket mice on Fort Irwin. It prefers gravel-sandy areas and

was most abundant on the gravel southwest of Echo Station at Goldstone.

DESERT POCKET MOUSE

The Desert pocket mouse is very rare at Fort Irwin, with captures only at the Bitter Springs area and to a much lesser extent, in an area on the southern Post by the Langford impact area.

DESERT WOOD RAT

They have been found on Post to be most abundant in areas of rocky substrates including boulder outcrops, rocky ridges and hills, rocky canyons and washes or any rocky habitat. The wood rats were also present in limited numbers on dune sites.

GRASSHOPPER MOUSE

The Grasshopper mouse is a facultative carnivorous species. They prefer gravel-sandy sites with creosote bushes, but may also be found around saltbush scrub.

CANYON MOUSE

The Canyon mouse prefers rocky habitats or can be found in gravel sites adjacent to rocky areas. This species and the pack rat are usually the primary or only rodent inhabitants of the rugged boulder fields, which are common in the Mojave Desert.

BRUSH MOUSE

The brush mouse is usually a chaparral/brush land species, but was found at Fort Irwin on rocky sites and sites adjacent to rocky sites.

BIRDS:

A diversity of raptors, songbirds and aquatic birds can be observed at Fort Irwin. Ravens are visually the most apparent bird at Fort Irwin and are protected under the Migratory Bird Act. However, ravens have been implicated as predators on juvenile tortoise and plans are being formulated in attempts to reduce the population.

REPTILES:

Reptiles are abounding in numbers and diversity in the Mojave Desert. Lizards and snakes and the tortoise have adapted well to the harsh desert life. Most of these animals are nonpoisonous but several poisonous snakes do live here. Some of the more common reptiles found in the area are described below.

RATTLESNAKES

Most people think of poisonous snakes when they think of poisonous animals or desert dangers. Few snakes are as dangerous or as aggressive as popular imagination would have it, nevertheless, world annual deaths from snakebites have been estimated at 40,000. However, in the United States the number of fatal snakebites number only a dozen or so annually. This is due to a relative low number of poisonous snakes in the United States and the presence of good medical care.

Rattlesnakes belong to a group of poisonous snakes called "pit vipers." The pit is actually a sensory organ located between the eye and the nostril of the snake. It is a heat sensitive device that aids in directing the snake in striking its victim. The rattlesnake has curved, retractable hollow fangs located near the front of the upper jaw. Of course, the rattlesnake bears a distinctive rattle on the end of his tail, which produces a buzzing noise when he shakes it vigorously. The rattle is a warning device used to notify other animals of the snake's presence. (Note; Rattlesnakes do not always give a warning by rattling. They do not always strike if one is coiled and close by.)

In the summer, rattlesnakes are active mostly in the early morning and evening periods. In the winter, they live in communal dens and are not very active. These snakes are found mostly around rocky areas and bushes where there is protection from direct sun. In the coolness of the night, however, rattlesnakes go out in the open in search for mice and other rodents.

Rattlesnakes go out of their way to avoid humans, and nearly all snakebites result from the victim either handling the snake or accidentally stepping on it or near it. (Note: all species of snakes are usually aggressive during their breeding season.) Few people die of rattlesnake's bites; however, panic, exertion, and hysteria must be avoided to slow the spread of the venom. The loss of fingers or limbs is common. Someone applying incorrect first aid for the bite often aggravates these injuries.

Non-poisonous snakes found at the NTC are the Gopher snake and the Couch whip/Red Racer.

PREVENTIVE MEASURES. The easiest way to avoid snakebite is simple:

*DON'T PUT YOUR HANDS OR FEET WHERE YOU CANNOT SEE!

*Use caution when hiking, camping, mountain climbing, or in any other outdoor activity, because a rattlesnake may be nearby.

*When walking, keep your eyes on the path and avoid stepping into clumps of brush and weeds. If a soldier should accidentally step on or otherwise disturb a snake, it will attempt to strike. Chances of this happening while traveling along trails or waterways are remote if a soldier is alert and careful.

*Keep your hands off rock ledges where snakes are likely to be sunning.

*Attempt to camp on clean, level ground. Avoid camping near piles of brush, rocks, or other debris.

*Sleep on camping cots or anything that will keep you of the ground. Avoid sleeping on the ground if at all possible.

*Hike with another person.

*Handle freshly killed poisonous snakes only with a long tool or stick. Snakes can inflict fatal bites by reflex action even after death. The head of a decapitated rattlesnake can bite up to one hour after the head was severed.

*Wear heavy boots and clothing for some protection from snakebite. If a snake attempts to strike, the pants can possibly snag its fangs and cause the snake to prematurely close its jaws.

*Poisonous snakes do not always inject venom when they bite or strike a person. However, all snakes may carry tetanus (lockjaw); anyone bitten by a snake, whether poisonous or non-poisonous, should immediately seek medical attention. If someone is bitten, do the following:

*Remain calm and have the victim lie down.

*Immobilize the bitten extremity. **DO NOT ELEVATE.**

*Clean the area of the bite with soap and water, if possible. **DO NOT** use ointments of any kind.

*Place a constricting band one to two fingers breadths above and below the bite. (It should not have a tourniquet-like affect).

*Cool the bite area by placing an ice bag over the area of the bite. **DO NOT WRAP IN ICE OR PLACE ICE DIRECTLY ON THE SKIN.** Chemicals cold packs activated by squeezing the package to mix the chemicals that produce an intense cold may be bandaged onto the bitten area to slow the spread of venom.

***DO NOT** attempt to cut open the bite or suck out the venom.

*__DO NOT__ give the casualty food, alcohol, stimulants (coffee or tea), drugs or tobacco.

*Transport the victim to a medical treatment facility immediately.

MOJAVE RATTLESNAKE

This rattlesnake is probably the most dangerous snake north of Mexico. This is due to its combination of quick-striking defense behavior an also its venom, whose potency may approach
that of a cobra.

The Mojave rattlesnake is greenish gray to yellow in color. It has brown diamonds marking the midline of its back. White scales surround the diamonds. Black and white rings encircle its tail. The white rings are significantly larger than the black rings.

DESERT TORTOISE

Desert Tortoise burrows are indicated by the half moon shape of the openings and may be between 3 and 30 feet long. One or more individuals may occupy these burrows. They prefer to dig their burrows where the predominant habitat is that of bajadas and valleys of the creosote bush scrub community. Tortoises prefer areas where the slope aspect faces southwest, west and east. They also seem like areas where the elevation is between 700 and 1000 meters.

ARTHROPODS (INSECTS AND SPIDERS):

There are many species of arthropods, which are very easily found and seen in the Mojave Desert. Others though may not be obvious but they are no less interesting. In recent years, hospital admissions of personnel due to bites and stings of poisonous arthropods have exceeded the admissions for treatment of snakebites. Only about a third of the deaths due

to poisonous bites were from snakes; the others were caused by poisonous arthropods. Some of the desert arthropods are harmless but have a bad reputation among people because of their scary appearance. A few of the important and interesting arthropods of this desert area are described in this section.

The following first aid measures should be taken immediately if bitten or stung by an arthropod:

*If there is a stinger present, for example, from a bee, remove the stinger by scraping the skin's surface with a fingernail or knife. DO NOT squeeze the sac attached to the stinger because it may inject more venom.

*Wash the area of the bite/sting with soap and water (alcohol or an antiseptic may also be used) to help reduce the chances of an infection and remove traces of venom.

*Remove jewelry from bitten extremities because swelling is common and may occur.

*Apply ice or cold compresses to the site of the bite/sting to help reduce swelling, ease the pain, and slow the absorption of venom. Meat tenderizer (to neutralize the venom) or calamine lotion (to reduce itching) may be applied locally.

*Seek medical aid.

***CAUTION!** Insect bites/stings may cause anaphylactic shock (a shock caused by a severe allergic reaction). This is a life threatening event and a **MEDICAL EMERGENCY!** Be prepared to immediately transport the casualty to a medical facility.

BITING OR PIERCING ARTHROPODS:

BLACK WIDOW SPIDER

The female black widow spider is an average sized spider with a shiny black body and is one of the few truly dangerous spiders in the world, with venom capable of causing muscular cramps, convulsions, excruciating pain and even death. It usually has a distinctive red hourglass marking on the underside of its abdomen; however, the exact shape may vary. The figures can be two or more distinct triangles or blotches or else only an irregular long red area. The male spider is considerably smaller than the female and is usually a patterned brown color. The male is not a threat to man.

The black widow is usually found in its irregular-shaped web near the ground. Common web sites are under stones, loose bark, and water faucets, in woodpiles, in garages, rodent burrows, and outdoor latrines. The female is often seen on such a web with its white, silk-shrouded egg masses.

Most human poisonings occur when the spider is accidentally trapped against part of the body or when the web is accidentally touched. Venom from the black widow spider affects the nervous system. Symptoms of a bite include intense pain at the bite sites, severe abdominal pain with "board-like" stiffness of the abdominal muscles, and profuse sweating. Four to five percent of those people bitten may die. Black widow bites are especially dangerous to young children and people with heart disease.

Frequent cleaning to remove spiders and their webs from buildings and outdoor living areas will decrease the possibility of accidental bites. Routing hose washing of potential spider habitats will discourage the black widow from living in these places. When working in spider-infested areas, wear long sleeved shirts and gloves.

DESERT RECLUSE SPIDER

The Desert Recluse Spider, dark brown to fawn colored and 5/16 inches in body length, stays out of sight in buildings, hollow trees, etc. and is most abundant around manmade structures. While it is quite poisonous, not many people are bitten by it. Unlike the black widow spider, both sexes of the Desert Recluse are capable of inflicting poisonous bites. It is also known as the Fiddle back Spider or Violin spider because of the distinct, violin-shaped marking behind the head.

The Desert Recluse spins an irregular web and can be found almost any place that has been relatively undisturbed for a long period of time. They sometimes take shelter in clothing or folded towels or sheets and as with the Black Widow bite mostly when caught between the skin and another object such as clothing or the ground.

The typical reaction following the bite of a Desert Recluse is killing of the tissue at the site of the bite. The victim may not be aware of being bitten for two or three hours. A stinging sensation is usually followed by intense pain. A small blister usually arises and a large area around the bite becomes swollen. The wound develops a crust and a surrounding red area. The crust falls off, leaving a deep crater, which often does not heal for several months. It is important to start treatment within 24 hours of bite in order to minimize the size of the ulcer or crater. Therefore, a Desert Recluse spider bite victim should be evacuated to the hospital as soon as a bite is confirmed, or even suspected. This is an example of a bite taken at various stages of treatment.

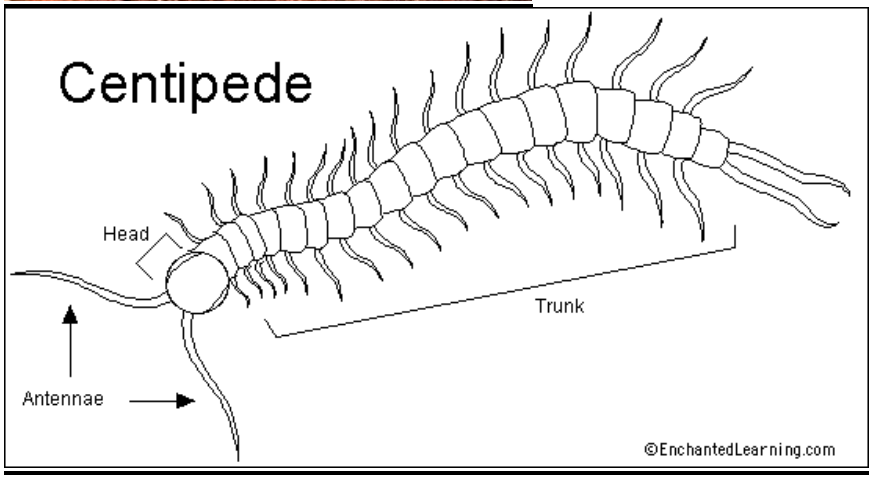
Day 3

Day 6

Day 9

Day 10

CENTIPEDES



There are many species of Centipedes of different sizes and colors and they may be found almost everywhere. In our desert they are most often seen at night after summer rains. Centipedes are segmented; worm like creatures that possess well developed poison glands for killing their prey. These glands are at the base of the first pair of legs, which arch forward to function with the mouth when biting. The body of the centipede is made up of a distinct head and 150 to 170 or more similar body segments. Each body segment has one pair of jointed legs.

Centipedes bite man only in self-defense, as when threatened. The bite is painful, much like the sting of a bee, but otherwise it is not serious. For treatment, use cold compresses. Symptoms of the bite usually disappear within 24 hours if the bite does not become infected.

TARANTULAS

A female and male tarantula

Tarantulas, with their long legs (their leg span can reach up to 5 7/8 inches) and large hairy bodies, are ferocious in appearance and feared by many, no doubt due to the way they are depicted in motion picture horror films. In reality, their venom is weak and they are unable to inflict more than temporary injury and pain. The bite has been described as "painful as a couple of pin stabs." Tarantulas are not usually aggressive and are often seen in our desert after heavy rains. Tarantulas have fine hair on the abdomen that, when loosened by scraping with their hind legs, is very irritating when it comes in contact with the mucous membranes of the eyes and nose of mammals. This diversion often gives the tarantula time to escape its predator. Tarantulas are actually helpful to man in that they destroy many harmful insects.

The large brown and black California Tarantula occurs in our area inhabiting the dry slopes of the hills. It is only mildly venomous and has a docile disposition, as do most of these large spiders.

SCORPIONS

Although all scorpions are poisonous, the stings of many causes bee-sting like symptoms. Their length ranges from less than one inch up to three inches in length and come in various colors. They have a crablike appearance and a five-segment tail, which terminates in a hooked stinger. The end segment of the tail has two poison glands. The tail is carried arched over the scorpion's back and the stinger is inserted into the victim by a quick forward thrust.

The venom is injected through the needle-sharp, hollow stinger. Once injected the venom produces a sharp pain. The stings of some scorpions are no more dangerous than a wasp's sting. However, a few species are deadly, especially those in the tropics. The most poisonous scorpions known to occur in the United States are found in Arizona and one area in New Mexico; they are not located in the Fort Irwin area. It is important to note that some people may experience an allergic reaction to the sting of some arthropods (i.e. bees, wasps, and scorpions), which may result in a medical emergency.

Scorpions found in the Fort Irwin area usually measure one inch and their sting causes a burning sensation and a welt, which will disappear with no complication as long as there is no allergic reaction. Once stung the area should be immersed in ice water if available and medical attention should be sought. Incision and suction of the wound is **not** performed.

Scorpions are night creatures and usually appear between dusk and dawn. They are rarely seen during the day. They have a tendency to hide cool shady areas like under rocks. Sleeping bags should be checked at night prior to going to

sleep. In the morning any clothing and boots should be shaken out prior to being put on.

WIND SCORPIONS (SOLPUGIDS)

Commonly known on Fort Irwin as Sun Spiders, these are harmless spider-like animals. They are easy to recognize by the pair of large, pincer like jaws on their heads in front on their mouth. They are 3/8 to 2 inches long and brownish or yellowish in color. Sometimes they are hairy. Solpugids are totally harmless, as they have no venom glands. They are found in and around structures and prey on insects.

KILLER BEES

Killer Bees are slightly smaller than the European honey bee, but only an expert can tell them apart

Africanized bees proliferate because they are less discriminating in their choice of nests than native bees, utilizing a variety of natural and man-made objects, including hollow trees, walls, porches, sheds, attics, utility boxes, garbage containers and abandoned vehicles. They also tend to swarm more often than other honeybees.

> The first swarm of Africanized bees was detected in the U.S. in October 1990 when they were captured in a baited trap at the border town of Hidalgo, Texas. AHB colonies were first reported in Arizona and New Mexico in 1993 and in California in October 1994. Within a year, more than 8,000 square miles of Imperial, Riverside and northeastern San Diego counties were declared officially colonized by Africanized Bees.

Although such fatalities are alarming, Africanized Bees probably present the greatest danger in the U.S. to American beekeeping and American agriculture in general. AHBs often enter European colonies to mingle and mate with them. Such mating results in more hybrid bees having African genes and tendencies dominating over European ones. An entire colony may suddenly take on aggressive and short-tempered behavior.