



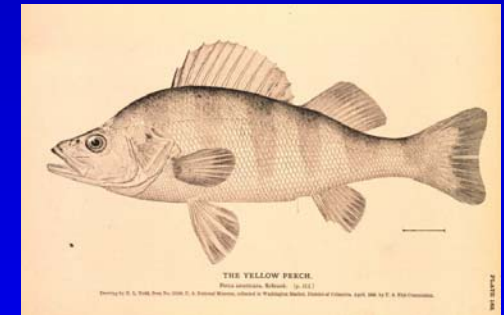
Coastal Coho Assessment

Oregon Plan For Salmon and Watersheds

Introduced Fishes Impacts



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What are the Factors affecting recovery and sustainability of coho?

Harvest?

Hatchery Fish?

Introduced Fishes? (IF)

Habitat?

Fish Health?

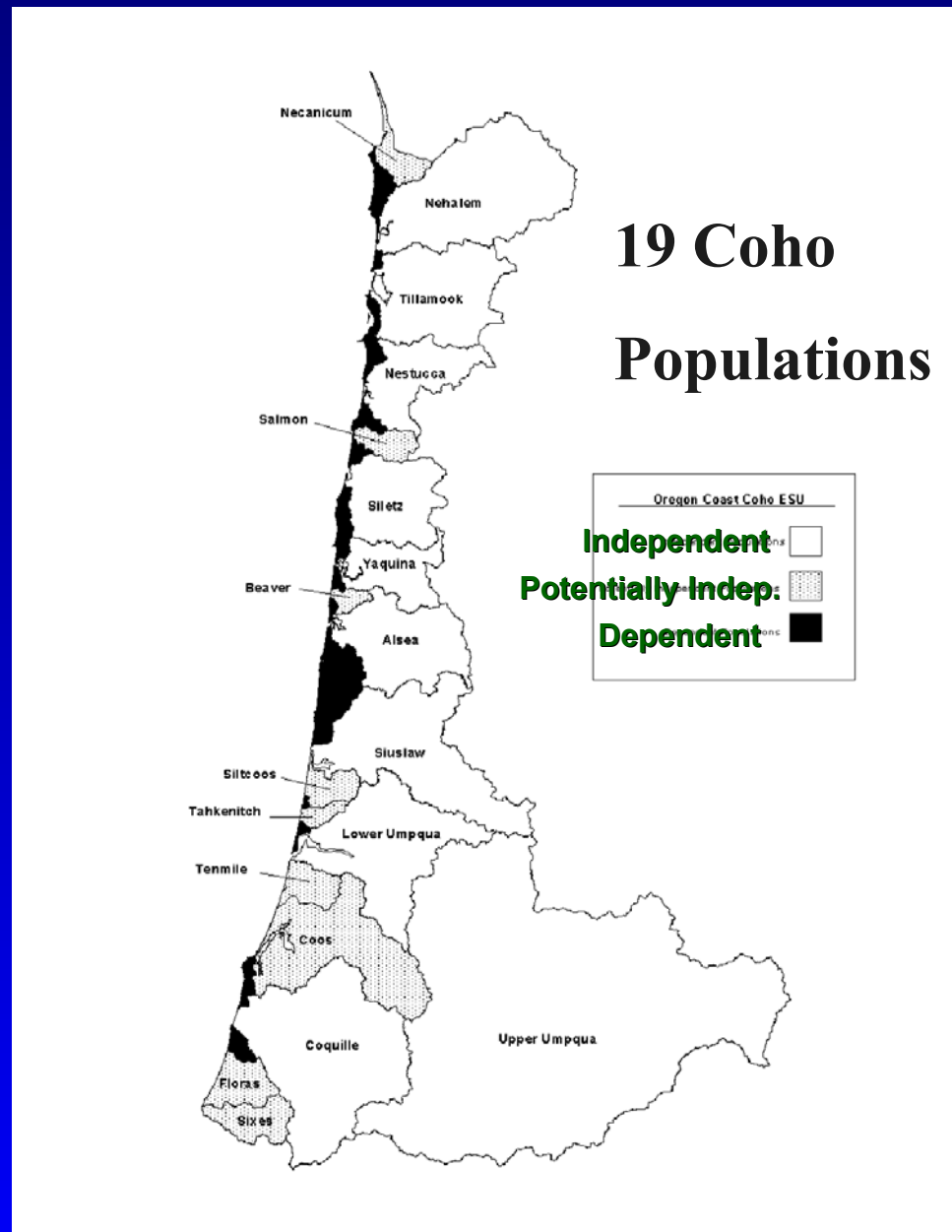
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Assess impacts of Introduced Fishes on three scales:

- ▶ Coho Population Scale
- ▶ OR Plan Monitoring Area Scale
- ▶ ESU Scale

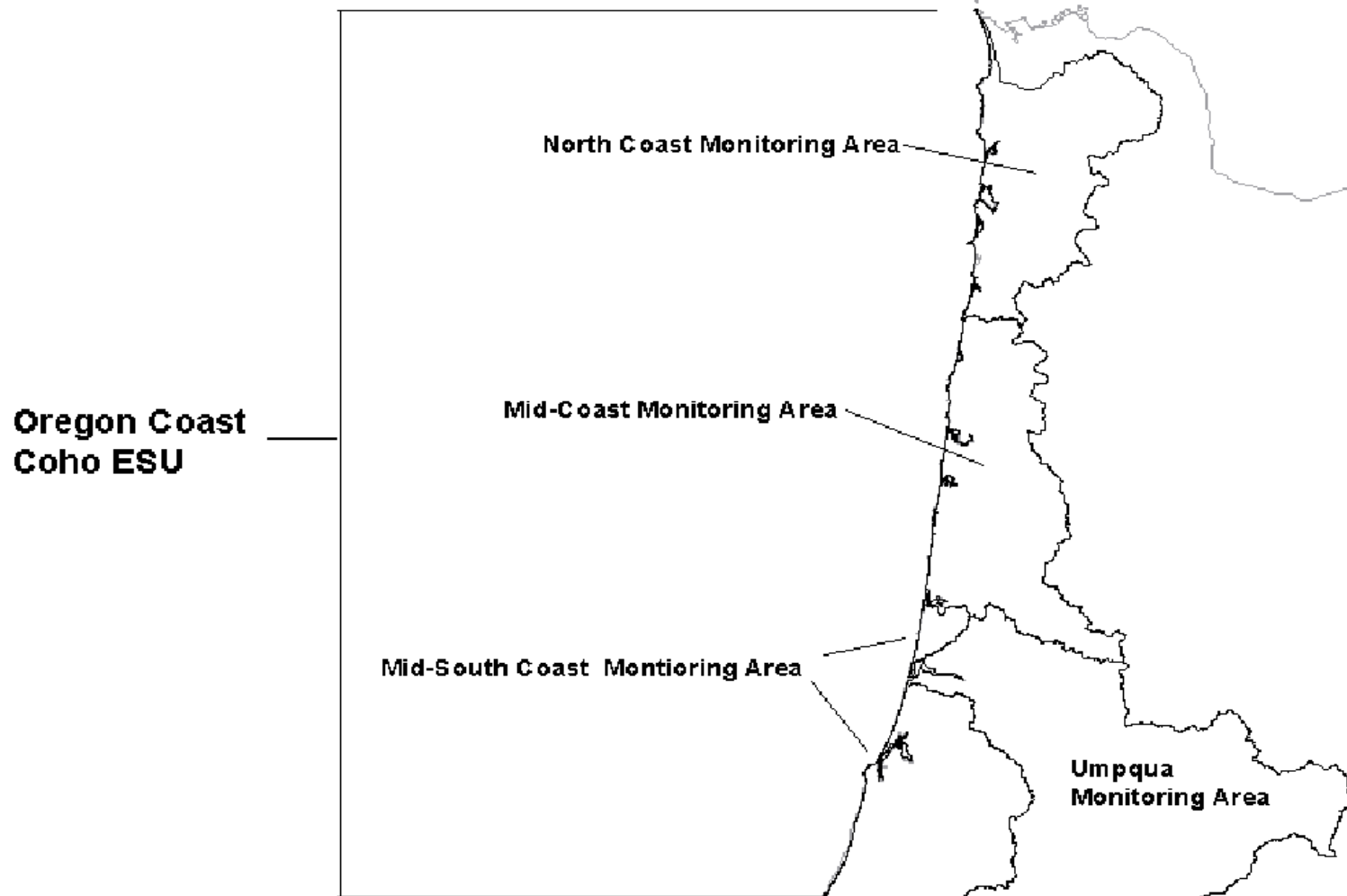
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- ▶ Necanicum
- ▶ Nehalem
- ▶ Tillamook
- ▶ Nestucca
- ▶ Salmon
- ▶ Siletz
- ▶ Yaquina
- ▶ Beaver
- ▶ Alsea
- ▶ Siuslaw
- ▶ Siltcoos
- ▶ Tahkenitch
- ▶ Umpqua (L. and U.)
- ▶ Tenmile
- ▶ Coos
- ▶ Coquille
- ▶ Floras
- ▶ Sixes



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Monitoring Areas and ESU



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Impacts on ESU Scale:

- ▶ Impacts localized within the ESU
- ▶ Overlap/potential risk with **IF** greater on Southern half of coast
- ▶ Poorest Coho performance--North
- ▶ Strongest Coho runs where **IF** impacts have highest potential--South
- ▶ Reduction or loss of summer lake-rearing life history for Coho in basins that were historically large coho production areas

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North Coast Monitoring Area

- ▶ Necanicum to Nestucca
- ▶ Very little overlap between Coho and IF
- ▶ Little to no risk identified to recovery/sustainability of Coho

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Mid-Coast Monitoring Area

- ▶ Salmon to Siuslaw
- ▶ Slightly greater overlap between Coho and **IF** than North Coast
- ▶ Still relatively low **IF** abundance and low impacts to Coho
- ▶ Little to no risk identified to recovery/sustainability of Coho

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Umpqua Monitoring Area

- ▶ Increased overlap of Coho and **IF** than North & Mid-Coast
- ▶ Higher **IF** abundance and potential impacts
- ▶ Evidence does not suggest **IF** prevent recovery/sustainability of Coho

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Mid-South Coast Monitoring Area

- ▶ Siltcoos to Sixes
- ▶ Increased overlap of Coho and IF than North & Mid-Coast
- ▶ Higher IF abundance and potential impacts
- ▶ Reduction or loss of summer lake rearing life history--warmwater fish and habitat
- ▶ Numbers of striped bass greatly reduced from historic
- ▶ Strongest, most stable Coho runs on Coast

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“The Lakes Complex”: Siltcoos, Tahkenitch, Tenmile

- ▶ All have **Warmwater Mix: LB, BG, YP, BC, BrB**
- ▶ **Competition, Predation, and altered Ecology**
- ▶ **Tenmile: Hybrid Bass--discontinued**
- ▶ **Loss of summer lake-rearing Coho life history**
- ▶ **Habitat Alterations**
- ▶ **Relatively strong, stable Coho runs at reduced level from historic**

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Lower Umpqua Population

- ▶ SB, StB, Shad, BrB, LB, BC, BG
- ▶ Overlap only during smolt outmigration
- ▶ **Smallmouth**--water temperatures and feeding, stomach analysis, prey size analysis
- ▶ **Striped bass**--primarily in Smith River trib.
- ▶ Low impact identified to Coho; Chinook?

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▶ Upper Umpqua Population

- ▶ SB, BrT, LB, BC, BG
- ▶ Overlap primarily during smolt outmigration
- ▶ Brown Trout in upper N. Umpqua
- ▶ Channel catfish, Green sunfish, Tui chub
- ▶ Low impact identified to Coho; Chinook?

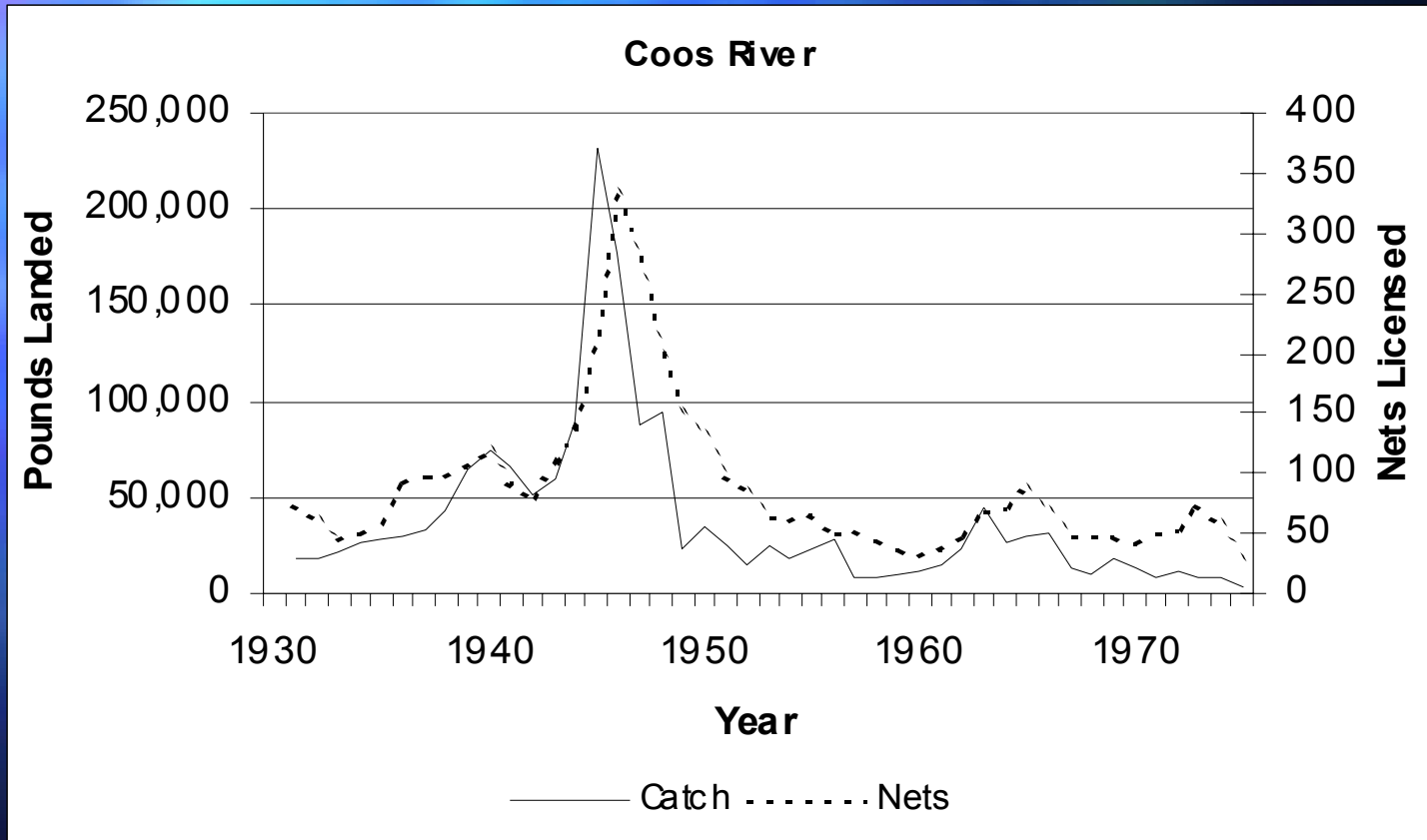
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Coos and Coquille Populations

- ▶ StB and Shad
- ▶ Natural production of **StB** now minimal in Coos
- ▶ No evidence of **shad** impacts on Coho
- ▶ Loss of overwinter habitat in Coquille Valley
- ▶ Overlap only during smolt outmigration
- ▶ **Smallmouth** in Coquille? **LB, YP, BrB, BG**
- ▶ Moderate level of impacts to Coho, potentially

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Striped Bass Commercial Harvest



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Management of IF

- ▶ Along coast, generally Statewide regs on **warmwater fish** (e.g. **LB, BG...**)
- ▶ Umpqua **SB**--liberal, 10-fish daily bag and no size limit
- ▶ **Shad**--no limits; no protection; no enhanct.
- ▶ **Striped bass**--most restrictive in U.S.? (30" min. size, 2 fish per day)--Trophy Fish
- ▶ **StB**--stocking in Coos Basin currently suspended indefinitely
- ▶ **Brown trout**--catch and release trout fishery

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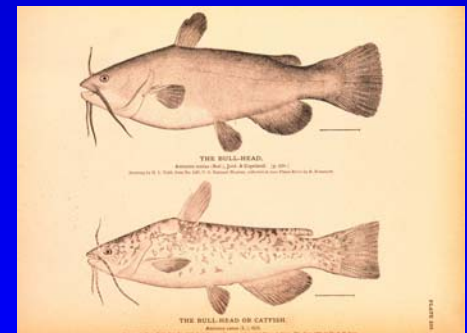
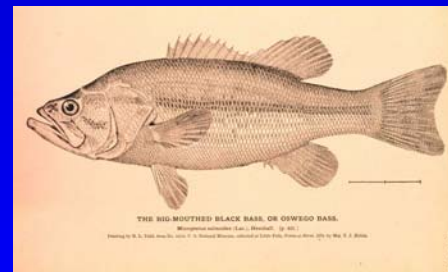
Monitoring of IF

- ▶ Devils Lake--monitoring of **Grass Carp** effects (weeds, warmwater pop'ns., coho)
- ▶ Districts conduct periodic lake gillnetting and electrofishing
- ▶ Monitoring significantly reduced with loss of Western OR Warmwater Biologist position
- ▶ Section 10 permit needed to conduct lake ES
- ▶ Coos Bay Salinity Study--**StB** (1996-2000)
- ▶ “Incidental” monitoring

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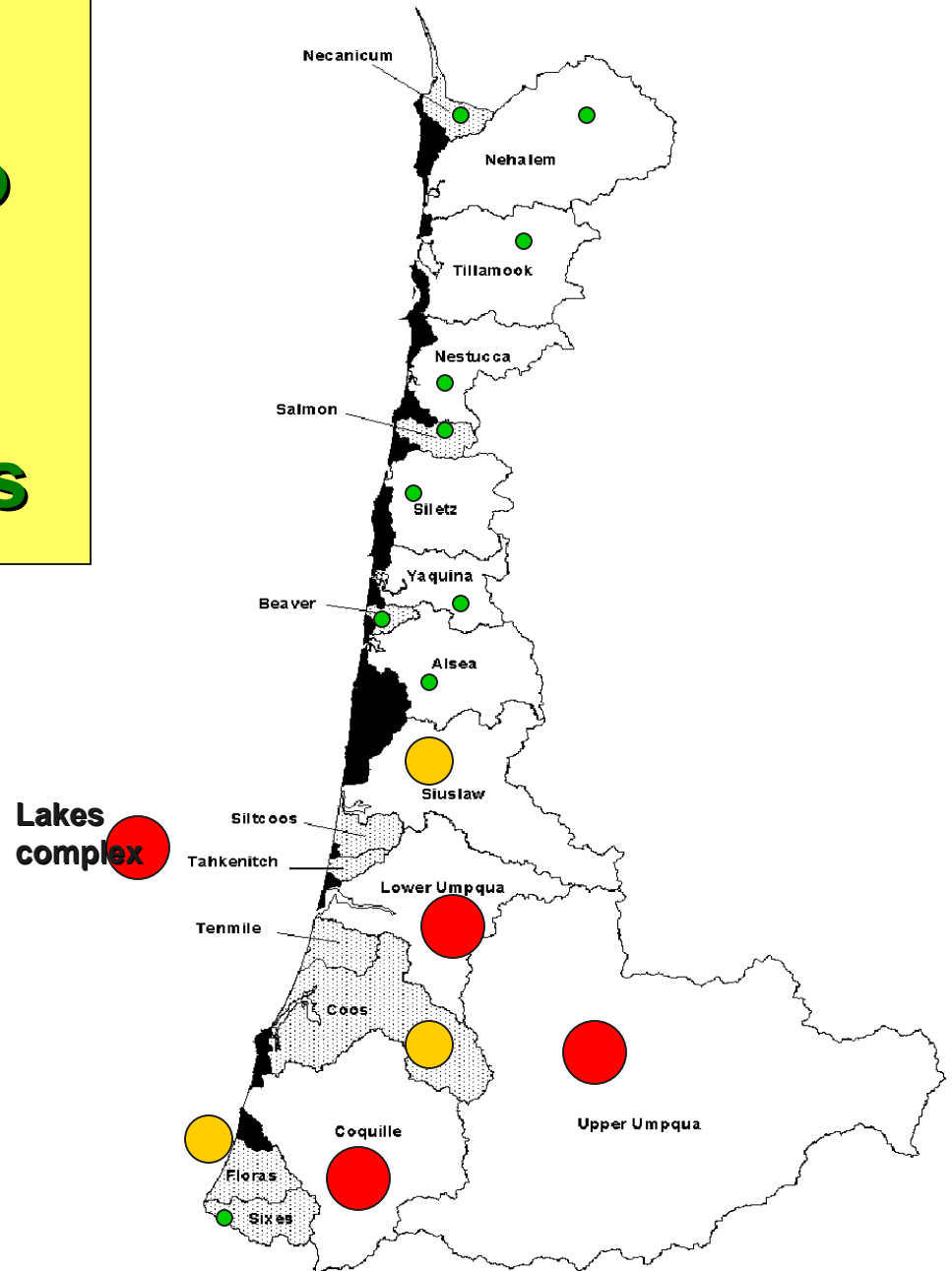
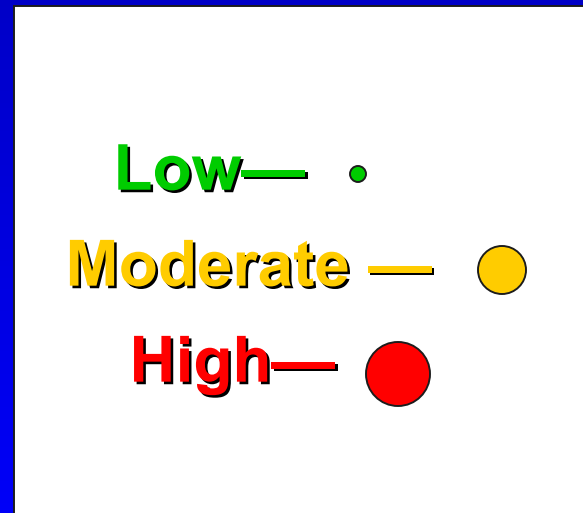
Summary:

- ▶ Impacts and risks of **IF** greatest at Coho Pop. scale



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Overlap and Potential Risks to Coho Salmon Populations from Introduced Fishes



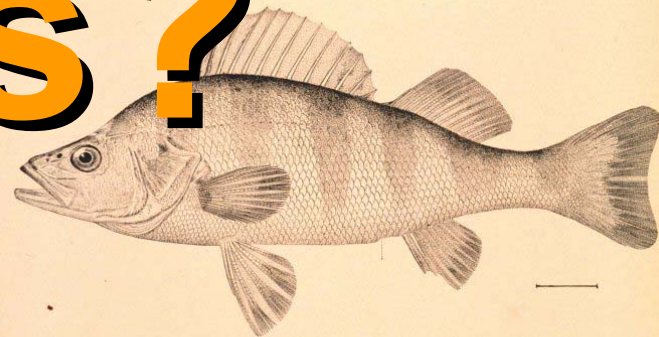
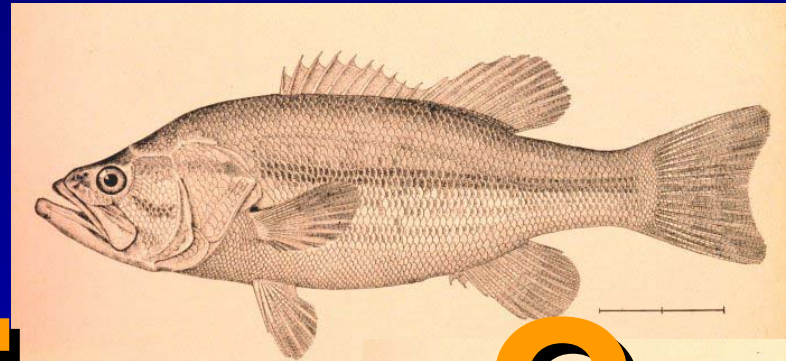
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Summary: (cont.)

- ▶ Impacts/risks can be difficult to confirm
- ▶ Exposure to **IF** not widespread on ESU scale
- ▶ Wholesale elimination of **IF** difficult, if not impossible, to achieve
- ▶ Control/reduction of **IF** impacts possible
- ▶ Impacts of **IF** should be considered collectively with other factors
- ▶ Much of the assessment of impacts is based on District Management Data and professional observations, with few intensive research studies

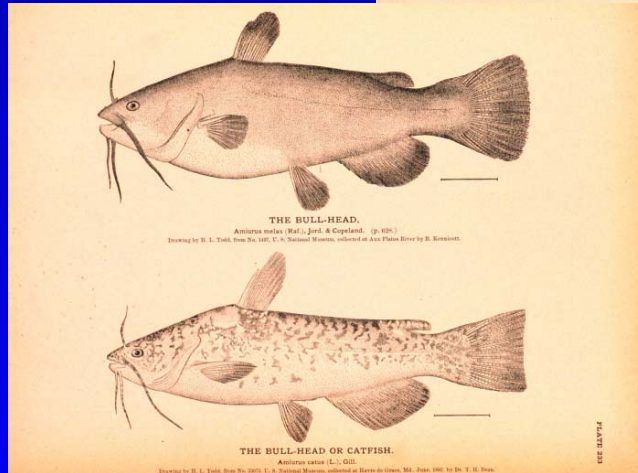
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Questions?



THE YELLOW PERCH.
Perca americana, Schrank. (p. 414.)
Natural Museum, collected in Washington Market, District of Columbia, April, 1866, by U. S. Fish Commission.

PLATE 106



THE BULL-HEAD.
Ameiurus nebulosus (Raf.), Jord. & Cooper. (p. 420.)
Drawing by E. L. Tall, from the U. S. National Museum, collected at New York River by E. Kennell.

THE BULL-HEAD OR CATFISH.
Ameiurus sabellicus (L.), Gill.
Drawing by E. L. Tall, from the U. S. National Museum, collected at New York River by E. Kennell.

PLATE 107