

# FISH TRACKING STUDIES USING MODEL 290/291/295 ACOUSTIC TAG SYSTEMS



The following are a few examples of fish tracking studies using *Model 795 Acoustic Tags* and *Model 290/291/295 Acoustic Tag Tracking Systems*.

## Rivers and Canals

- Columbia River, Wells to Wanapum dams, Wash. 1998-2008
  - chinook smolts, yearling (*Oncorhynchus tshawytscha*)
  - chinook smolts, sub-yearling (*Oncorhynchus tshawytscha*)
  - sockeye salmon smolts (*Oncorhynchus nerka*)
  - steelhead smolts (*Oncorhynchus mykiss*)
- Columbia River, below Bonneville Dam, Wash.: 2006
  - chum salmon adults (*Oncorhynchus keta*)
- Denmark River, Denmark: 2004
  - Atlantic salmon smolts (*Salmo salar*)
- Elwah River, Washington: 2005
  - chinook smolts (*Oncorhynchus tshawytscha*)
  - rainbow trout (*Oncorhynchus mykiss*)
- Sacramento R. and Georgiana Slough, California: 2003-2006, 2008-2009
  - chinook salmon smolts (*Oncorhynchus tshawytscha*)
  - striped bass (*Morone saxatilis*)
- San Joaquin R., California: 2005-2009
  - chinook salmon smolts (*Oncorhynchus tshawytscha*)
- McKenzie River, Northwest Territories, Canada: 2003
  - lake trout (*Oncorhynchus namaycush*)
  - inconnu (*Stenodus leucichthys*)
- Vernita Bar, Columbia R.: 2005-2006
  - fall chinook salmon adults (*Oncorhynchus tshawytscha*)
- Lake Washington Ship Canal, Washington: 2000, 2003-2006
  - chinook salmon adults (*Oncorhynchus tshawytscha*)
  - chinook salmon smolts (*Oncorhynchus tshawytscha*)
  - coho salmon smolts (*Oncorhynchus kisutch*)

## Lakes

- Fringe Pond, England: 2005
  - barbel (*Barbus spp.*)
  - carp (*Cyprinus carpio*)
  - perch (*Perca spp.*)
  - rudd (*Scardinius spp.*)
  - tench (*Tinca tinca*)
- Lake Union, Washington: 2003, 2006
  - chinook salmon adults (*Oncorhynchus tshawytscha*)
  - chinook salmon smolts (*Oncorhynchus tshawytscha*)
- Lake Washington, Washington: 2003, 2005-2006, 2008
  - chinook salmon smolts (*Oncorhynchus tshawytscha*)
  - smallmouth bass (*Micropterus dolomieu*)
  - prickly sculpin (*Cottus asper*)

## Hydropower Dams

- Arapuni Power Plant, Waikato R., New Zealand: 2004
  - shortfinned eel (*Anguilla australis*)
  - longfinned eel (*Anguilla dieffenbachii*)
- Barrage St. Timothee, Canal de Beauharnais, Montréal, Canada: 2004
  - American eel (*Anguilla rostrata*)
- Bonneville Dam, Columbia R., Oregon/Washington: 2000
  - chinook salmon smolts (*Oncorhynchus tshawytscha*)
  - steelhead smolts (*Oncorhynchus mykiss*)
- Cabot Station, Connecticut R., Massachusetts: 2002
  - American eel (*Anguilla rostrata*)
- Chittendon Lock and Dam, Lk. Wash. Ship Canal, Washington: 2000, 2003, 2006
  - chinook salmon adults (*Oncorhynchus tshawytscha*)
  - chinook salmon smolts (*Oncorhynchus tshawytscha*)
  - coho salmon smolts (*Oncorhynchus kisutch*)
- Cowlitz Falls Dam, Cowlitz R., Washington: 2000, 2002
  - salmonid smolts (*Oncorhynchus spp.*)

Grand Coulee Dam, Columbia R., Washington: 2000-2004  
kokanee (*Oncorhynchus nerka*)

Lac St-Louis, Montreal, Canada: 2004  
American eel (*Anguilla rostrata*)

Lower Granite Dam forebay, Snake R., WA: 1999-2003  
salmonid smolts (*Oncorhynchus spp.*)

Lower Granite Dam tailrace, Snake R., Washington: 2002  
salmonid smolts (*Oncorhynchus spp.*)

Mayfield Dam, Lewis R., WA: 2001  
coho salmon smolts (*Oncorhynchus kisutch*)

McNary Dam, Columbia R., Washington/Oregon: 2006  
chinook salmon smolts (*Oncorhynchus tshawytscha*)  
sockeye salmon smolts (*Oncorhynchus nerka*)  
northern pike minnow adults (*Ptychocheilus oregonensis*)

North Fork Dam, Clackamas R., Oregon: 2001  
chinook salmon smolts (*Oncorhynchus tshawytscha*)

Pinopolis Locks, Cooper R., South Carolina: 2002-2003  
shortnose sturgeon (*Acipenser brevirostrum*)  
American shad (*Alosa sapidissima*)  
blueback herring (*Alosa aestivalis*)

Priest Rapids Dam, Columbia R., Washington: 2004, 2006  
chinook salmon smolts (*Oncorhynchus tshawytscha*)  
sockeye salmon smolts (*Oncorhynchus nerka*)  
steelhead smolts (*Oncorhynchus mykiss*)

Rock Island Dam, Columbia R., Washington: 2001-2009  
chinook salmon smolts, yearling (*Oncorhynchus tshawytscha*)  
chinook salmon smolts, sub-yearling (*Oncorhynchus tshawytscha*)  
sockeye salmon smolts (*Oncorhynchus nerka*)  
steelhead smolts (*Oncorhynchus mykiss*)

Rocky Reach Dam, Columbia R., Washington: 1998-2000, 2002-2010  
chinook salmon smolts, yearling (*Oncorhynchus tshawytscha*)  
chinook salmon smolts, sub-yearling (*Oncorhynchus tshawytscha*)  
sockeye salmon smolts (*Oncorhynchus nerka*)  
steelhead smolts (*Oncorhynchus mykiss*)  
northern pike minnow adults (*Ptychocheilus oregonensis*)

Swift Dam, Lewis R., Washington: 2002  
chinook salmon smolts (*Oncorhynchus tshawytscha*)  
coho salmon smolts (*Oncorhynchus kisutch*)

The Dalles Dam, Columbia R., Washington: 2004  
chinook salmon smolts (*Oncorhynchus tshawytscha*)

Upper Baker Dam, Baker R., Washington: 2002  
coho salmon smolts (*Oncorhynchus kisutch*)  
sockeye salmon smolts (*Oncorhynchus nerka*)

Wanapum Dam forebay, Columbia R., Washington: 2004, 2006-2010  
chinook salmon smolts (*Oncorhynchus tshawytscha*)  
sockeye salmon smolts (*Oncorhynchus nerka*)  
steelhead smolts (*Oncorhynchus mykiss*)

Wanapum Dam in-turbine, Columbia R., Washington: 2004  
steelhead smolts (*Oncorhynchus mykiss*)

Woodruff Dam, Apalachicola R., Florida: 2005-2006  
Alabama shad (*Alosa sapidissima*)  
gulf striped bass (*Morone saxatilis*)  
gulf sturgeon (*Acipenser oxyrinchus*)

## Marine

Friday Harbor, San Juan Islands, Washington: 2005, 2007, 2009  
Puget Sound dock shrimp (*Pandalus danae*)

Skagit Bay, Washington: 2005  
chinook salmon smolts (*Oncorhynchus tshawytscha*)

Glacier Bay, Alaska: 2002  
Pacific halibut (*Hippoglossus stenolepis*)

LeReunion Island, Indian Ocean, France: 2003  
common blueshrike snapper (*Lutjanus kasmira*)  
bigeye scad (*Selar crumenophthalmus*)

New Caledonia, South Pacific Ocean: 2004  
various reef species

Shilshole Bay, Puget Sound, Washington: 2003, 2006  
chinook salmon smolts (*Oncorhynchus tshawytscha*)  
coho salmon smolts (*Oncorhynchus kisutch*)

Willapa Bay, Pacific Coast, Washington: 2001, 2002  
shiner perch (*Cymatogaster aggregata*)  
spotted greenling (*Hexagrammos spp.*)  
staghorn sculpin (*Leptocottus armatus*)  
(also Dungeness crab and green crab)

**Aquaculture**

- Aquaculture pond, Queensland, Australia: 2000-2003
  - carp (*Cyprinus carpio*)
  - freshwater catfish (*Tandanus tandanus*)
  - silver perch (*Bidyanus bidyanus*)
- Dockside net pen, Atlantic coast, New Hampshire: 2003
  - Atlantic cod (*Gadus morhua*)
- Open ocean net pen, Atlantic coast, New Hampshire: 2004-2006
  - Atlantic cod (*Gadus morhua*)