# NEWSLETTER

## OKLAHOMA CHAPTER - AMERICAN FISHERIES SOCIETY

March, 1981

The AFS - TWS joint spring meeting will be held April 3 and 4, 1981 at Beavers Bend State Park. Topics to be discussed concern forestry practices and wildlife management in southeastern Oklahoma.

Technical presentations concerning forestry practices and fish and wildlife management will begin at 1:00 pm at the Carl Albert Heritage Center at the Park. The afternoon program will be full - topics include:

Weyerhaeuser practices and research in southeastern Oklahoma - Dr. Ed Miller, Weyerhaeuser

Potential impacts on aquatic life from forestry practices - Ron Suttles and David Martinez

Habitat requirements of the Leopard darter and other stream fishes - Ray Jones

Timber/wildlife management on the Ross Foundation - Danny Adams

Oklahoma's antlerless deer program - Rex Umber

Eastern wild turkey in Oklahoma - Reggie Thackston

Relationships between three Bobwhite quail indices - Bryan Pilcher

Techniques for sexing and aging migratory American coots - Bill Eddleman

A film concerning forestry and fish - wildlife has been scheduled for showing Friday evening.

A field trip to Weyerhaeuser properties is planned for Saturday morning at 8:00 ; Weyerhaeuser representatives will be accompanying us to answer questions. You should bring a sack lunch for the tour.

Reservations have been made by the Chapter for Youth Camp 1 (see map) in Beavers Bend State Park. The park is 7 miles north of Broken Bow on Highway 259 and 3 miles east on Highway 259A. Accomodations include the eight - person cabins and the camp kitchen, including utensils. You should plan on bringing your food ( or eat at a nearby hamburger joint) and your own sleeping bag, or sheets and blankets, and personal items. Telephones, TV's, and radios are not available in the cabins. Camp sites are available for tents. The cost for renting the camp is $75, and that amount will be divided by the number of participants staying at the Camp to determine individual costs. An additional registration fee of $2.00 or less may be charged to non-student members to cover rental cost of the auditorium.

As stated in the last NEWSLETTER, this mailing includes a brief summary or statement of objectives of fisheries surveys and research by several people and agencies.

## Oklahoma Cooperative Fishery Research Unit

1. Evaluate the potential of striped bass x white bass hybrids for controlling stunted sunfish populations in lakes and ponds
2. Identify factors leading to stunted crappie populations and recommend important areas for further research
3. Evaluate the food habits of striped bass x white bass hybrids and largemouth bass in Sooner lake
4. Determine changes in populations of forage fish and growth rates of predatory fish in a reservoir containing striped bass x white bass hybrids
5. Determine the extent and causes of early mortality of channel catfish in ponds on Ft. Sill military reservation
6. Determine feasibility of caged fish culture in small Oklahoma farm ponds
7. Determine feasibility of use of Tilapia aurea to control aquatic vegetation in fish culture ponds
8. Determine effects of silviculture activities on water quality, benthic macroinvertebrates, and fish in southeastern Oklahoma streams
9. Determine the general population structure and investigate resource use and partitioning among the principal darter species in Glover Creek, Oklahoma
10. Construct and field-test a quantitative model to determine the habitat requirements of selected fishes
11. Determine factors involved in habitat selection and the status of the Smallmouth bass population in Buffalo National River, Arkansas, and determine the effects of increasing recreational activity on the small bass fishery

## Oklahoma Department of Wildlife Conservation

### Striped Bass Research Study

1. Determine trends in selected biological parameters of a large reservoir with a developing striped bass population (Texoma Reservoir)
2. Determine population status and trends of striped bass and native sportfish in Keystone Reservoir
3. Monitor movements and determine extent of emigration and immigration of striped bass in the central pool area of Texoma Reservoir

### Fish Research and Surveys for Oklahoma Lakes and Reservoirs

1. Determine effect of Mississippi silversides, Menidia audens, introduction on growth and condition of largemouth bass, white crappie and bluegill in Oklahoma reservoirs
2. Develop, implement, and evaluate an annual "bass cooperator" program to monitor catch rates of bass fishermen and statistics of the largemouth bass fishery throughout Oklahoma
3. Determine feasibility of developing predictive models of shoreline seined young-of-the-year largemouth bass as an index of density using correlated physical and environmental parameters

4. Determine feasibility of estimating population size, size structure, and harvest of the Neosho River paddlefish population
5. Determine survival of 200-300 mm channel catfish one year after stocking in Lake Burtschi and compute cost per fish creeled

Oklahoma Fisheries Management Program

1. Make fisheries management recommendations from standardized surveys conducted on existing public waters in Oklahoma

Largemouth Bass Investigation

1. Evaluate a 14-inch minimum length-limit regulation for managing largemouth bass populations in Oklahoma reservoirs
2. Establish lagremouth bass habitat indices for Oklahoma reservoirs
3. Determine if stocking fingerling largemouth bass of the size available on July 1 (3 inch-class) at the rate of 500/ha would increase the number of harvestable-size bass and the catch rate of bass in small impoundments (less than 200 ha surface area)
4. Determine if stocking fingerling largemouth bass of the size available on July 1 (3 inch-class) at the rate of 250/ha would increase the number of harvestable-size bass in large impoundments (greater than 200 ha surface area)
5. Compare growth and catch per unit effort between Florida and northern largemouth bass when stocked together in small impoundments (less then 200 ha surface area) having existing fish populations
6. Compare growth and survival between Florida and northern largemouth bass when stocked togerher in new impoundments containing less than 200 surface ha
7. Determine the changes, if any, in population structure and growth of largemouth bass and bluegill; harvest and catch rate of sportfish; and largemouth bass food habits and forage availability from a 12 to 15 inch protective length range (slot length limit) on Birch Reservoir
8. Identify the cause(s) of chronic largemouth bass problems in Oklahoma reservoirs

Pond Research and Management

1. Determine cost/benefits of various management procedures intended to increase condition factors and growth of bluegill, Lepomis macrochirus, and largemouth bass, Micropterus salmoides, in ponds

Commercial Fishing Projects

1. Evaluate impact of commercial fishing on flathead catfish populations of Oklahoma reservoirs
2. Monitor fish populations in lakes undergoing commercial harvests in Oklahoma

Environmental Section

1. Investigate extent of acid mine drainage from abandoned lead and zinc mines in the Tar Creek watershed, Ottawa County, Oklahoma

2. Determine effects of silviculture activities in southeastern Oklahoma streams (in conjunction with the OCFRU)

Oklahoma University - Biological Station

1. Study striped bass-forage fish-zooplankton interactions
2. Evaluate temperature, oxygen, and pH tolerances and selectivities of a variety of Notropis species in Oklahoma, with emphasis on adaptations for arid environments of the Great Plains versus environments of uplands, e.g., the Ozarks and Ouachitas

U. S. Fish and Wildlife Service, Office of Ecological Services

1. Planning joint FWS/EPA demonstration project to test the Service's new Stream Simulation and Assessment Model (SSAM IV), used to introduce water quality aspects into the Instream Flow Groups Incremental Methodology
2. In conjunction with an SCS watershed project, has collected information on fish populations in Walnut Bayou, Love County, Oklahoma. Data will provide a total estimate of fish abundance and biomass in this fifth order stream during the summer drought of August, 1980; the information will also be useful in determining relationships of various pool parameters to fish population and community characteristics.
3. Other activities include fish and wildlife studies in conjunction with planning Federal/State water resource development projects, including the Oklahoma Comprehensive Water Plan, High Plains Study, and Poteau River Project - Oklahoma and Arkansas. Tulsa ES has recently completed fish tissue sampling for toxic substances on Robert S. Kerr Lake (Sequoyah National Wildlife Refuge) and continued involvement with the Tar Creek mine drainage study.