



ENDANGERED SPECIES TECHNICAL BULLETIN

Department of the Interior • U.S. Fish and Wildlife Service • Endangered Species Program, Washington, D.C. 20240

SCHREINER APPOINTED ALASKA AREA DIRECTOR

Early in March, Keith M. Schreiner—guardian of the Endangered Species Program since its inception 7 years ago—will be bound for Alaska. Serving as Associate Director (Federal Assistance) of the Service since 1974, Schreiner will soon be moving on to different, and in many ways, broader duties as the Service's Area Director for Alaska.

Announcing the coming appointment, Robert L. Herbst, Assistant Secretary of the Interior for Fish and Wildlife and Parks, noted the critical nature of the task ahead for Schreiner. "In Alaska we have unique opportunities, but we must meet unique challenges in the period following resolution of the Alaska conservation lands (D-2) issue. The Area Director . . . responsible for meeting these challenges must be experienced, innovative, and resourceful."

Lynn A. Greenwalt, Director of the Service, said of Schreiner: "There is probably no person in our organization more capable of dealing effectively with the great natural resources issues of Alaska. Schreiner's past experience with Federal Aid programs has given him keen appreciation for the close, cooperative relations between States and the Federal Government. Under his direction, the Nation's Endangered Species Program went through its birth pains and today there is an endangered species consciousness in the United States where none existed before."

As Alaska Area Director, Schreiner will be responsible not only for Endangered Species, but also for all fish and wildlife resources on some 34 million acres of lands now managed by the Service. (Of this land base, 11.8 million acres were just added in December by President Carter as the first

"National Wildlife Monuments" in the Nation. Another 40 million acres are slated for addition to the massive network of National Wildlife Refuges in Alaska pending the adoption of the

Administration's current recommendations.)

Schreiner, 53, was born in Ollie, Iowa. He and his wife, Mary, have
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Photo by Marvin Finneley

Outgoing Associate Director, Keith M. Schreiner (left), with Director Greenwalt at farewell party in his honor.

BOBCAT, SEA OTTER, TRUMPETER SWAN TO RETAIN THEIR STATUS UNDER CONVENTION APPENDICES

Following the receipt of comments from the scientific and conservation communities, the U.S. Fish and Wildlife Service (acting as U.S. Management Authority) has finalized its recommendations concerning the status of U.S. species listed under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (F.R. 2/14/79). In so doing, the Service has decided to withdraw its October 1978 proposals to reclassify

the bobcat, Southern sea otter, and trumpeter swan. The October proposals would have removed or reduced the protection provided these species by the 47 nations now party to this international treaty.

Many U.S. species are protected under the provisions of the Convention, a treaty developed to protect animals and plants which are threatened by international commercial trade.

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REGIONAL BRIEFS

Endangered Species Program regional staffers have reported the following activities for the month of January.

Region 2. The Houston Toad Recovery Team held its first meeting on Jan-

uary 18-19. Team members discussed the results of a survey conducted this past breeding season: no Houston toads (*Bufo houstonensis*) were turned up in suspected or previously known Harris County habitat areas. (The team also visited the type locality of the

species and surrounding areas to observe recent habitat destruction.)

Region 3. The first meeting of the Northern Bald Eagle Population Recovery Team met on January 26-27. The team discussed preliminary plans, team assignments, and recovery planning guidelines.

Around January 20, two bald eagles were found sick near Dubuque, Iowa. They were checked and treated at the Raptor Rehabilitation Center of the University of Minnesota, but the exact cause of illness was not determined. Within days, other eagles, ducks, and fish were found dead and dying in the same vicinity along the Mississippi River. Upon discovering a toxic substance emanating from a sewer pipe, a Service "SWAT" team took water samples and attempted to "harrass" eagles to keep them from fishing in the contaminated river waters. EPA's assistance was solicited, but as yet the source of contamination has not been determined.

Region 4. With concurrence from the Service and the Snail Darter Recovery Team, the Tennessee Valley Authority (TVA) has initiated efforts to establish a third population of snail darters (*Percina tanasi*) within the species' probable historic range. The fish are being taken from the Hiwassee River and transplanted to sites in the Holston River below Cherokee Dam. One immediate objective is to move as many fish as possible before the onset of the spawning season, from January to mid-April, so that reproductive success can be evaluated for the current year.

The population in the Little Tennessee River is not being utilized as a source for transplant stock because of uncertainties about its current status. The 2,400 snail darters now estimated to be in the Hiwassee River are the result of TVA transplant work conducted during 1975 and 1976.

Following the Endangered Species Committee January 23 decision to deny an exemption for TVA's Tellico dam (see January 1979 BULLETIN), TVA scheduled a public meeting on February 22 to solicit public views on alternatives to the dam and reservoir.

A Marine Turtle Workshop was sponsored by our Service and the National Marine Fisheries Service on January 24. Among the topics of discussion were modifications of shrimping nets to reduce turtle mortalities, surveys of the Southeastern U.S. coast to identify essential habitat areas, and research on artificial incubation, imprinting, and captive rearing.

Region 6. The Black-footed Ferret Recovery Plan is now printed and available for review in the Denver Regional Office.

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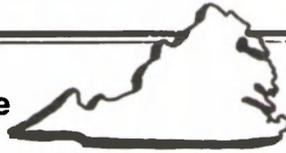
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EAGLE, PEREGRINE, RED-COCKADE, AND COUGAR AMONG PROTECTED SPECIES IN VIRGINIA

Commission of Game
and Inland Fisheries



Signs of the cougar in Virginia have been scarce since the end of the 19th Century, when this once common, wide-range predator seemed to vanish from the Eastern United States (except southern Florida, where a small, remnant population of Florida panthers, a subspecies of cougar, survives in the everglades). Generally driven west of the Mississippi by over-hunting and destruction of the dense habitat essential to its survival, the eastern cougar (*Felis concolor cougar*) was last identified in Virginia from a kill reported in Washington County in 1882.

The cougar has been fully protected in Virginia since 1971. Under a cooperative program with the Fish and Wildlife Service, State biologists are now trying to determine if the cat has managed to survive in the State. Since July 1977, when investigations formally began, nearly 40 cougar sightings have been recorded in Virginia. The most promising news came during 1978, when a specialist at the Smithsonian Institution in Washington identified the track of a cougar from a plaster cast made in western Virginia—positive evidence of the animal's existence in the State.

Under the direction of Joe Coggin, a biologist with the Virginia Commission of Game and Inland Fisheries, State specialists are intensifying their investigations in hopes of learning the cougar's true status in Virginia. With more information on the cougar's numbers and distribution in the State, recommendations can be made to promote its recovery.

The eastern cougar is one of 23 species of wildlife protected under Virginia's 1972 endangered species law. The State was one of the first to sign a cooperative agreement with the Service for endangered species conservation in 1975. Nearly all of Vir-



The existence of the eastern cougar in Virginia is the subject of investigations by State specialists. (This photo was taken in Colorado.)

ginia's research and survey activities on behalf of listed species are conducted with the assistance of Federal Endangered Species Grant-in-Aid funds. Inclusive of the Federal matching share, Virginia's endangered species program is budgeted at around \$50,000 for fiscal year 1979, with the State one-third contribution coming from the sale of hunting and fishing licenses. (While the State generally receives two dollars from the Service for every one dollar it contributes for research, survey, enforcement, or other pertinent activities, Virginia and Maryland now receive the maximum 75 percent in Federal matching funds for their joint conservation efforts on behalf of the bald eagle and the Delmarva fox squirrel.)

Virginia plans to research all protected species thoroughly before attempting management. Status surveys and other studies for most of the State-listed species are now accomplished

primarily through contractual arrangements administered under the State's Commission of Game and Inland Fisheries. For other than law enforcement functions, all endangered species projects are handled either by the Commission's Game Division (birds and mammals) or Fish Division (clams, fish, and snails) or—for sea turtles and other marine species—the Virginia Institute of Marine Science (under the State's Department of Commerce).

Other Mammal Work

During 1976 and 1977, potential habitat sites for the possible future release of Delmarva fox squirrels (*Sciurus niger cinereus*) were surveyed in Accomac and Northampton Counties by Dr. Ed Fisher of Averett College under contract to the Commission. Three possible release sites have been identified.

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Convention Appendices *Continued from page 1*

Both an import and export permit are required for the international shipment of species listed under the Convention's Appendix I (and may be issued only upon a finding by a country's scientific authority that no detriment to the survival of the species will result from such trade). For Appendix II species, only an export permit is required with a similar finding by the scientific authority.

Acknowledging the controversy generated by several of the proposed changes (see the November 1978 BULLETIN), the Service based its revised recommendation on the bobcat (*Lynx rufus*) on a re-examination of available data on the species as well as comments received from the Endangered Species Scientific Authority (ESSA), the Council on Environmental Quality, Defenders of Wildlife, a number of States, and other organizations and individuals (following publication of the preliminary proposals in the November 27, 1978, *Federal Register*).

Noting that it is not now possible to determine whether the bobcat would become threatened with extinction if international trade restrictions were removed, the Service concluded that available data do *not* meet the criteria for removing the species from Appendix II. Although there is some question as to the bobcat's qualifications for inclusion if it were not already listed, criteria adopted by parties to the Convention require "positive scientific evidence that the species can withstand the exploitation resulting from the removal of protection afforded by the present listing." Such evidence should include population surveys, an indication of population trends "showing recovery sufficient to justify deletion or transfer," and an analysis of potential commercial trade in the species. (The Service and ESSA have proposed the adoption of special criteria for removal

consistent with those applied in adding a species to the Convention lists to be considered by the Convention parties at their March 19-30, 1979, meeting in Costa Rica. The Service says it will reconsider the appropriateness of including the bobcat on the Convention appendices if the new removal criteria are adopted.)

Concerning the Southern sea otter (*Enhydra lutris nereis*), the Service has

revised its proposal primarily for the reasons summarized in the following ESSA comments:

"The Southern sea otter has recovered from virtual extinction to a population estimated at somewhat less than 2,000 individuals. Although this recovery is encouraging, the population is still extremely small, is in competition with abalone fishery in California, and is vulnerable to oil pollution. In addition, the animal's pelt is very valuable, having led to its original decimation. Perhaps the strongest argument in

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U.S. Fish and Wildlife Service Photo

The Service has withdrawn its October 1978 proposals to reclassify the bobcat

Schreiner *Continued from page 1*

three sons. He received an M.S. in wildlife management from Iowa State University in 1950, and joined the Service in 1956 after working with both the Iowa and North Dakota game and fish departments. During his 23 years with the Service, Schreiner served as a wildlife research biologist and held several positions in the Service's Federal Aid and River Basin Studies programs, prior to his appointment as

Chief of the Office of Endangered Species and International Activities.

Indeed, Keith Schreiner is best known for his devotion to keeping the Federal Endangered Species Program alive—an often thankless responsibility. Although it is not possible to measure the mark left by Schreiner on the cause of endangered species conservation, we know he will be missed by staffers and associates—and perhaps

thanked centuries from now for caring enough to persist.

(Harold J. O'Connor has been designated to serve as Acting Associate Director—Federal Assistance (and Endangered Species Program Manager) until Schreiner's replacement is selected. In the meantime, C. Phillip Agee (with the Service's Division of Federal Aid) will assist O'Connor as Acting Deputy Associate Director.)

We are now pleased to present another perspective on Mr. Schreiner's years in Washington—his own.

LOOKING BACK OVER MY SHOULDER

Keith M. Schreiner

On February 5, 1979, Director Greenwalt, my boss, personal friend, constructive critic, and sometimes father confessor, announced that I would soon be taking a long trip northwest so that I could jump out of the frying pan into the fire—he stated that I would soon become the new Area Director in Alaska. Before I again undertake the improbable, and/or the impossible, it's time for a quick look "over my shoulder" at my past 7 years with the Endangered Species Program.

Back in the Spring of 1972, when I "reluctantly agreed" (that's a euphemistic phrase that means "I was dragged kicking and screaming") to take the job called Chief, Office of Endangered Species and International Activities, I was admonished by a high Departmental official to do three things: (1) get a hard hitting Endangered Species Act with teeth in it, (2) implement that law as quickly and effectively as possible, and (3) make the Endangered Species Program highly visible to the public. I guess we probably exceeded his fondest dreams. He may even think it was a slight overkill in some respects.

Then came endless days and weeks that stretched into months of drafting and redrafting an endangered species bill, testifying before congressional committees, making speeches to advocates and antagonists alike, and generally trying to convince the Nation that it needed to develop an endangered species conscience quickly. That initial effort was doomed to fail—we didn't make it on the first attempt.

But dedicated bureaucrats (aided and abetted by a growing public concern for the environment) aren't thwarted that easily. We went back to the bill-drafting board and shored up the most vulnerable parts of the bill and then just for the heck of it put a few extra teeth in our endangered baby's jaw. It sold like cold margaritas to thirsty gringos. The congressmen on the Hill were highly receptive. Most private conservation groups were ecstatic. State conservation agencies were apprehensive, but were not openly hostile. And the general public, that gave a hoot one way or the other, voted a big resounding yes.

On December 3, 1973, we had an Endangered Species Act that was tough, hard hitting, and gut wrenching.

On December 4, 1973, we had hell to pay. Private bird fanciers that were shipping Endangered birds were in violation of the law. Zoos that were importing a new tiger or exporting an old gorilla were breaking the law. Animal dealers that had been wheeling and dealing all over the world had a very large crimp put in their style. And, Heaven forbid, even the circuses that were carrying Endangered animals in their menageries were breaking the law every time they crossed a State line.

On December 5, 1973, about 42,000 (plus or minus a few) constituents who felt their ox was being gored or thought their pantry was being pilfered wrote their congresspersons.

On December 6, 1973, I started a long and undistinguished career of standing on the carpet of irate congresspersons and getting beat about the head and shoulders. Various other parts of my anatomy did not go unscathed. This is a very unnerving occupation that tends to thicken your hide, increase your blood pressure, and make you determined to give rather than get ulcers. I can sit on broken beer bottles without discomfort—my blood pressure is 180 over 120 and I don't have ulcers—but some other folks do.

Following this initial shock, we worked several months on trying to control pandemonium, write the inevitable regulations that go with a new law, staff an office, obtain some dollars, and generally get on with the business of saving endangered species.

It was about this time that some members of the news media caught on to the fact that Endangered Species issues are generally controversial and hence make good copy. Too, there were bureaucrats involved and everyone knows that newspaper readers just love to read about roasted Federal bureaucrats. So, the phone started ringing and the press corps trooped in, and the free-lance writers had a field day—and they still do. One day a pretty but pernicious little newspaper writer bounced in and asked, "How do you cope with this continuing barrage of bad press?" My answer—"It hurts worse the first time than it does the second, third, fourth,

fifth, etc., and I console myself by thinking about all of the things that people and animals will do with and on today's newspaper tomorrow." I ended this interview as always by asking her to spell my name correctly and get my title right.

I suppose most Federal regulatory agencies live with controversy. But it seems that emotions run particularly high when Endangered animals are concerned. The warmer the blood, the furrier the hide, the browner the eye, and the cuddlier the animal, the higher the emotions run—sometimes almost to a fever pitch. Why don't more people care about a highly Endangered rattlesnake or a creepy little bug? They are God's creatures too. I'll never understand.

In the years that followed, a dedicated and hard working endangered species staff did their stuff in a big way and I was promoted to Associate Director, largely because of the staff's efforts (and the fact that no one else was damn fool enough to take the job). Together we listed species, established recovery teams, wrote and implemented recovery plans, prepared law enforcement strategies, enforced import and export regulations, designated Critical Habitats, acquired key Endangered species habitats, increased the activities of an ongoing research program, enhanced our Endangered species activities on National Wildlife Refuges, started up a very promising extension education effort, wrote budget justifications, prepared for endless congressional overview hearings, developed a permit processing organization, implemented an international convention of monumental magnitude, consulted with and advised Federal agencies on the consequences of their activities that might affect Endangered species, answered "jillions" of letters and phone calls and started up this BULLETIN—just to name a few activities.

It was hard work, fun, and very, very rewarding. It was exasperating, frustrating, and heart rendering. It was all of those and much more than memory or conscience permit me to recall. But above all, it was good and I'm glad I played a role. I can only hope that you are glad too.

To those of you who will carry on the battle—hold your chins high, gird up your loins, and charge. But don't ever look back over your shoulder—it makes you a little sad.

State Report

Continued from page 3

One hundred and fifty nest boxes designed for Delmarva fox squirrels were placed on Chincoteague National Wildlife Refuge in Virginia by Maryland members of the Service-appointed Delmarva Fox Squirrel Recovery Team in August 1976. The boxes are examined regularly, and any squirrels found are marked and released. Indications are that the squirrels have adapted to the Chincoteague habitat and are multiplying, with population estimates of between 100 and 200 squirrels.

Also under contract with the Game Division, Dr. V. M. Tipton of Virginia Polytechnic Institute has been supervising the State's Indiana bat (*Myotis sodalis*) project. Tipton has already plotted all caves where bats could possibly be found in Virginia, and plans to enter the caves as time permits. Indiana bats can only be found in Virginia during winter months from around October 1 to May 1. Thus far, Tipton has located only one cave, in Wise County, which is occupied by the species. The cave has a population of 500-1,000 bats.

The big-eared bat (*Plecotus townsendii virginianus*) has also been located in a cave in Burkes Garden, and there is evidence that the gray bat (*Myotis grisescens*) may occur in a cave in Wise County. Efforts are continuing to locate all species and determine their status in Virginia.

Bird Studies

Virginia has been actively participating with the Chesapeake Bay Bald Eagle Recovery Team, with Dr. Mitchell Byrd (College of William and Mary) serving as State representative. Under contract to the Commission, and in cooperation with other team members, Dr. Byrd and his assistants have run aerial surveys of all bald eagle (*Haliaeetus leucocephalus*) nests in Virginia over the past two years, and have monitored those nests found active.

Dr. Byrd believes the results of surveys thus far show reason for optimism regarding the status of the eagle in Virginia. This winter an eagle was seen carrying nesting material near the James River where, perhaps due to high levels of kepone and other contaminants, eagles have not bred for some time. Byrd and his colleagues soon hope to observe the first active nesting along the James in several years. In cooperation with personnel

from the National Wildlife Federation's Raptor Information Center, Byrd recently conducted aerial counts of wintering bald eagles in Virginia. A total of 114 eagles were observed between January 13 and 27, 1979, including 10 adults and 6 juveniles in the vicinity of the James River.

During recent years, personnel from the Raptor Information Center, under contract to the Commission's Game Division, have banded young eagles from known nests. In 1977, there were 33 active bald eagle nests in the State, in which 18 young birds were produced. Another 18 fledglings were produced in 1978 from 37 active nests, for an average production of 0.49 young per active nest and 1.29 young per productive nest. (The Federation banded 13 of the 1977 fledglings and 15 young 1978 birds, marking the Fish and Wildlife Service bands with colored vinyl streamers to make them more readily identifiable. Five of the 1978 fledglings along the Potomac River were also marked with numbered, white patagial markers in an attempt to determine their migration patterns.)

In cooperation with the Service's Patuxent Wildlife Research Center in Laurel, Maryland, both chick and egg transplants have been made with products of captive eagles at the Center. Early this past spring, two captive-reared eaglets, three weeks of age, were successfully introduced to an active eagle nest in Westmoreland County, Virginia. The receiving pair of eagles were in the midst of rearing their own chick when Virginia specialists and cooperators on the Federation's banding team managed to move the resident chick to another active nest in King George County already occupied by a chick of about the same age. Both the "shifted" eaglet and the Patuxent-reared chicks were successfully adopted by the foster parents, and all birds have fledged.

In 1977, one of two egg transplant attempts was successful in Virginia, although similar attempts failed in 1978. Researchers decided to replace the eggs produced by eagles nesting near the Mason Neck National Wildlife Refuge in northern Virginia when analyses conducted at the Patuxent Center revealed extraordinarily high contaminant levels in the eggs previously produced by the pair. Following the collection of "contaminated" eggs laid in 1977, two eggs produced by captive eagles were placed in the Mason Neck nest. The eggs were readily accepted and incubated by the adults, and one hatched. But on June 23—about two

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CONVENTION APPENDICES

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support of the Management Authority proposal is that the sea otter is thoroughly protected by other laws: particularly, the Marine Mammal Protection Act, the Endangered Species Act, and California State law. However, the Convention is the only global international agreement affording protection to this species, and because potential trade in the species has global dimensions that protection should not be lessened on the basis of more parochial laws."

Because available biological and other evidence does not clearly indicate that this species would more appropriately be listed under Appendix II, the Service has opted to retain the higher degree of protection for the sea otter.

Initially omitted from the appendices by clerical error, the trumpeter swan (*Olor buccinator*) is now recommended by the Service for retention on Appendix II primarily on the basis of ESSA's opposition to its removal because "the population is still quite small, and trade in feathers was the primary cause of its original depletion." Again, the Service has determined that the data on the status of the two U.S. trumpeter swan populations do not warrant removal of the species from Convention protection under existing criteria.

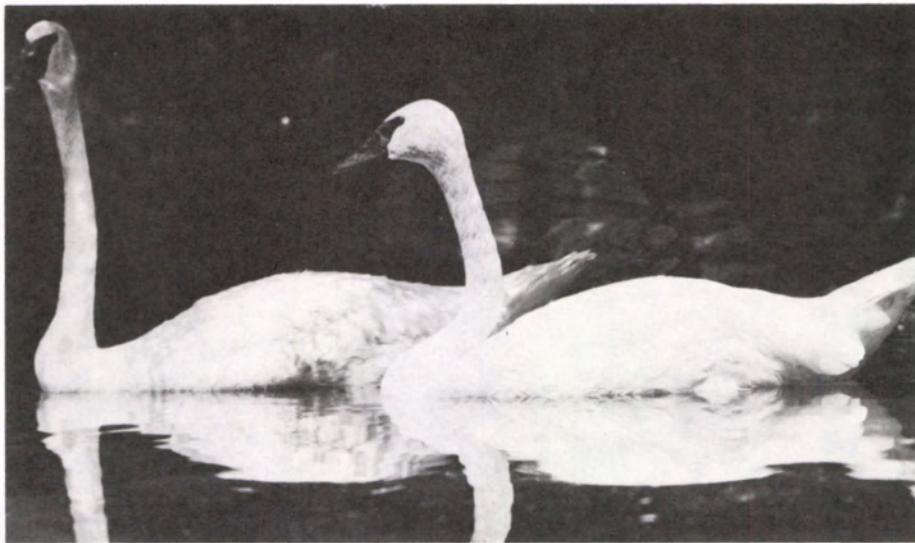
Other U.S. proposals formalized in the February ruling include

- removal of the Mexican duck (*Anas diazi*) from Appendix I and removal of the marsh hawk (*Circus cyaneus*), Mearn's quail (*Cyrtonyx montezumae mearnsi*), kestrel (*Falco sparverius*), U.S. osprey population (*Pandion haliaeetus*), and greater prairie chicken (*Tympanuchus cupido pinnatus*) from Appendix II.

- transfer of the Bolson tortoise (*Gopherus flavomarginatus*), Guadalupe fur seal (*Arctocephalus townsendi*), U.S. population of American crocodile (*Crocodylus acutus*), and golden eagle population (*Aquila chrysaetos*) east of the Mississippi River from Appendix II to Appendix I.

- transfer of the Atlantic sturgeon (*Acipenser oxyrinchus*), Peale's peregrine falcon (*Falco peregrinus pealei*), and Alaska population of bald eagle (*Haliaeetus leucocephalus*) to Appendix II.

- transfer of the American alligator (*Alligator mississippiensis*) to Appendix II. If adopted at Costa Rica, this new classification would allow regulated international commerce in alligators now reclassified (in three Louisi-



The trumpeter swan has been recommended for retention on Appendix II of CITES

ana parishes) as Threatened, *similarity of appearance** under the Endangered Species Act of 1973. (Alligator populations in an additional nine Louisiana parishes have also been proposed for such reclassification under the 1973 Act.)

* Under the Endangered Species Act of 1973 a species may be treated under similarity of appearance (S/A) provisions when it so closely resembles an Endangered or Threatened species that enforcement efforts are impaired, thereby posing an additional threat to the listed species.

In addition, the Service has decided to recommend retention of the goshawk (*Accipiter gentilis*) as it is now listed on Appendix II (rather than primarily for the purpose of controlling trade in other populations of the species). Because the goshawk is considered the rarest raptor in the conterminous 48 States (after the peregrine falcon, *Falco peregrinus anatum*), ESSA feared that local over-exploitation could result if the species' trade

were no longer regulated, especially in areas that are easily accessible. Because of this possibility, and the fact that U.S. populations of goshawks have not been well censused, the Service has decided to maintain the entire U.S. population of the species on Appendix II without annotation.

A similar revision in the U.S. proposal was made for the bighorn sheep (*Ovis canadensis*), in that data on the Canadian population of this species are not adequate to warrant its "removal" from Appendix II. Therefore, only the U.S. population listing will be annotated to indicate that its inclusion is to effectively control trade in other listed species. (Other recommendations for Appendix II listings with similar "annotations" are provided in the accompanying table.)

Revisions proposed by the U.S. and other countries will become effective only upon approval (by a two-thirds majority vote) of the nations party to the treaty at their Costa Rica meeting. The Service will announce the decisions on U.S. proposals and other significant Convention issues in the *Federal Register* following the March meeting. (A post-Costa Rica "debriefing" is also tentatively scheduled for April 4 at 1:00-3:30 in Room 7000B, Main Interior. Contact Joan Caton (703/235-2418) for more information.)

Species	Current listing	Proposed Recommendation	Final Recommendation ¹
Mexican duck	App. I	Delete from App. I	Delete from App. I.
Marsh hawk	App. II	Delete from App. II	Delete from App. II.
Trumpeter swan	App. II ²	Delete from App. II	Retain in App. II.
Mearn's quail	App. II	Delete from App. II	Delete from App. II.
Sparrow hawk	App. II	Delete from App. II	Delete from App. II.
Bobcat	App. II	Delete from App. II	Retain in App. II.
Osprey	App. II	Delete U.S. pop. from App. II	Delete U.S. pop. from App. II.
Greater prairie chicken	App. II	Delete from App. II	Delete from App. II.
Atlantic sturgeon	App. I	Transfer to App. II	Transfer to App. II.
American alligator	App. I	Transfer to App. II	Transfer to App. II. ³
Southern sea otter	App. I	Transfer to App. II	Retain in App. I.
Peale's peregrine	App. I	Transfer to App. II	Transfer to App. II. ³
Bald eagle	App. I	Transfer Alaska pop. to App. II	Transfer Alaska pop. to App. II.
Northern elephant seal	App. I	Transfer to App. II	Transfer to App. II.
Golden eagle	App. II	Transfer eastern U.S. pop. to App. I	Transfer eastern U.S. pop. to App. I.
Guadalupe fur seal	App. II	Transfer to App. I	Transfer to App. I.
American crocodile	App. II	Transfer U.S. pop. to App. I	Transfer U.S. pop. to App. I.
Bolson tortoise	App. II	Transfer to App. I	Transfer to App. I.
Goshawk	App. II	App. II for control of other species	Retain as is on App. II.
Golden eagle	App. II	List western U.S. pop. in App. II for control of other species.	List western U.S. pop. in App. II for control of other species.
Gray wolf	App. II	List Alaska pop. in App. II for control of other species.	List Alaska pop. in App. II for control of other species.
Puma	App. II	List U.S. and Canada pop. in App. II for control of other species.	List U.S. and Canada pop. in App. II for control of other species.
Bighorn sheep	App. II	List U.S. and Canada pop. in App. II for control of other species.	List U.S. pop. in App. II for control of other species.
Grizzly and brown bears	App. II	List Alaska and Canada pop. in App. II for control of other species.	List Alaska and Canada pop. in App. II for control of other species.

¹ Final decisions on amendments to Appendices are made by agreement of the Party nations.

² The trumpeter swan was omitted from App. II in the authentic text of the Convention, apparently by clerical error.

³ At request of ESSA, the Service will propose to the Parties that these species be included in App. II both because of the potential threat of extinction and because of the need to control trade in other listed species.

State Report

Continued from page 6

weeks before the chick was ready for fledging—the nesting tree was downed by high winds. The eagle survived the fall, and roosted in a fallen tree nearby where the pair continued to feed it until it fledged around the 4th of July.

During the 1978 nesting season, the egg produced by the Mason Neck eagles was again removed, with a pair of captive-produced eggs substituted in its place. (Unfortunately, the adult female did not return to incubate the eggs.) The retrieved egg hatched at the Patuxent Center, and a surprisingly healthy chick emerged, leading biologists to discover the presence of a new, "clean" breeding female at the Mason Neck nest. Plans now call for the termination of egg transplants on Mason Neck with better prospects for the natural production of healthy chicks from this nest.

In addition to these bald eagle activities, a graduate student at the College of William and Mary is currently completing habitat analyses of all eagle nest sites in the State. Ten sites were completed in 1977-1978, and the two additional active sites located in the 1978 survey will be completed in 1978-1979. Data derived from these analyses will be utilized in developing management plans for each active bald eagle nest site in the State. Information obtained on the sites will also be helpful in the development of cooperative agreements with landowners on whose property nests are located.

This spring, Dr. Byrd also hopes to initiate radiotelemetry tracking of fledglings and to monitor at least one active nest with remote control video cameras.

Dr. Byrd and his assistants have recently completed a literature review of historical records of American peregrine falcons (*Falco peregrinus anatum*) in Virginia. Raptor counts on Virginia's eastern shore included more than three dozen of the Endangered peregrines (of which four were adults) from Sept. 23 through Oct. 29, 1978. About 10 peregrines wintered in Tidewater, Virginia, during the 1977-1978 season, and at least one bird used a bank building in Norfolk as a winter roost.

Last year, five peregrine chicks were placed on a State hacking station established on Cobb Island on the eastern shore (on an old Coast Guard look-out tower). Unfortunately, two of the chicks were blown from the tower



Photo by Steve Wunderley, U.S. Fish and Wildlife Service

Immature bald eagle, product of egg transplant on the Mason Neck refuge.

during a summer storm. The remaining three (1 female and 2 males) did fledge successfully, and were observed away from the hacking station for extended periods. One of the Cobb Island birds was observed at a raptor banding station on Fisherman's Island in October 1978. (Virginia personnel are now working to construct a better hacking site to prevent further losses.)

Also of interest, a peregrine hacked at Mt. Tom, Massachusetts, in 1978 (also in cooperation with Cornell's Peregrine Fund program) was observed wintering near Portsmouth in the fall. Counts of migrating peregrines will continue, and hacking of young falcons will be accomplished again during 1979 if young birds are available.

Counts of migrating peregrines will continue, and hacking of young falcons will be accomplished again during 1979 if young birds are available.

Extensive surveys in Sussex, Surry, Isle of Wight, King George, Southampton, and Brunswick Counties as well as Virginia Beach and Suffolk Cities were conducted by Dr. Byrd and graduate students to determine the status of the red-cockaded woodpecker (*Picoides borealis*) in these areas. More than 40 sites with one or more cavity trees were located; however, many appeared inactive. Nesting

activity was observed at six clan sites in 1977, but only at two sites in 1978. Dr. Byrd has expressed serious concern over the chances for recovery of the red-cockaded woodpecker in Virginia, as habitat analyses reveal that only 2 to 5 percent of Virginia counties currently have timber of an age that would support colonies of the bird.

Plans are now under way, in cooperation with the Union Camp Corporation, to establish a protected research site of about 200 acres in Sussex County for the woodpecker. Byrd and his colleagues will then have ample time to study the foraging habits, nesting activities, and habitat requirements of the bird.

A literature review and recording of observations of the brown pelican (*Pelecanus occidentalis*), a migrant species in Virginia, were continued by Dr. Byrd and his associates. Among other observations, one group of 30 brown pelicans was seen in May 1977 on Fisherman's Island National Wildlife Refuge. Since that time, only one pelican has been reported (in August 1977) offshore of the Back Bay National Wildlife Refuge.

Marine Turtles and Fish

Virginia also protects four federally-

listed species of fish, as well as four sea turtles (the Atlantic ridley, *Lepidochelys kempii*, hawksbill, *Eretmochelys imbricata*, leatherback, *Dermochelys coriacea*, and loggerhead, *Caretta caretta*).

Although the slender chub (*Hybopsis cahni*) has not recently been taken in the State, portions of the Clinch and Powell Rivers in Virginia's Scott, Russell, and Lee Counties (where the fish is likely to occur) have been federally designated as "Critical Habitat" for the species. Virginia's two other Endangered freshwater fishes, the yellowfin madtom (*Noturus flavipinnis*) and spotfin chub (*Hybopsis monacha*), have been respectively known from Copper Creek and the north fork of the Holston River, but neither species has been taken in Virginia since its listing by the Service.

Two additional freshwater fishes, the Roanoke logperch (*Percina rex*) and orangefin madtom (*Noturus gilberti*) are now being considered for Federal listing on the basis of data compiled by Dr. Robert Jenkins of Virginia Commonwealth University (under a Fish and Wildlife Service contract funded by the Army Corps of Engineers).

The shortnose sturgeon (*Acipenser brevirostrum*) is a coastal anadromous species generally known from the mouths of large rivers and estuarine areas, and ascends coastal plain rivers to spawn in fresh water. Known to grow as long as 3½ feet and weigh up to 20 pounds, the shortnose occurs from the St. John's River in Florida to the St. John River north of the U.S./Canada border. With assistance from NOAA's National Sea Grant Program, the Virginia Marine Advisory Service at the Virginia Institute of Marine Science (VIMS) is now involved in educational and data gathering efforts on behalf of the sturgeon, and has placed posters in fish landing houses to aid in identification of the fish (often mistaken for the more common Atlantic sturgeon, *Acipenser oxyrinchus*). With matching fund assistance through the Anadromous Fish Federal Aid Program (under NOAA's National Marine Fisheries Service), Dr. Joseph Loesch of VIMS is now evaluating the status of the shortnose sturgeon, whose existence in Virginia has been known only from one specimen taken years ago from the Potomac River.

A booklet on sea turtles is now in preparation by Dr. Jack Musick of VIMS to explain the biology of these marine creatures, help with their identification, and discuss the basis for their protected status. Entitled "The Marine Turtles of Virginia, with Notes on Identification and Natural History,"

the publication should be available this summer from the Virginia Sea Grant Advisory Service, VIMS, Gloucester Point, Virginia 23062.

Dr. Musick and his associates also investigate reports of sea turtle injuries and deaths, help with identification of turtles, and attempt to determine the causes of mortalities. There is generally a high incidence of loggerhead mortality during May and June, when loggerheads are common in Virginia's coastal waters. (This is the only sea turtle species that nests on Virginia's beaches.)

Molluscs

Nine species of endangered molluscs occur in the Tennessee River drainage in Virginia. Unfortunately, little is known of their current status and distribution. With funding assistance from the Service, TVA last year conducted a literature search on Virginia's molluscs and plotted their known distribution (under contract to the Commission). For fiscal year 1979,

VPI has been contracted to evaluate the status of listed Virginia mussels, their habitat types, and possible limiting factors.

1978 Symposium

In May 1978, Virginia Polytechnic Institute and State University, in cooperation with the Commission of Game and Inland Fisheries and VIMS, sponsored a symposium on the "Endangered and Threatened Plants and Animals of Virginia." The purpose of the session was to compile data on the status of jeopardized species in the State from which to formulate a list of species which are endangered, threatened, or "of special concern." In addition to biological information on these plants and animals, the proceedings of the symposium (to be available through VPI's Center for Environmental Studies) will contain research, management, and education suggestions for State and Federal planners, scientists, and citizens.

- WANTED - INFORMATION ON STURGEON



- ATLANTIC STURGEON -

Distinguishing Features:

Snout long, pointed, curved upward, notched at base; Plates on top of back closely spaced or overlapping



- SHORT-NOSED STURGEON -

Distinguishing Features:

Snout short, blunt, wide at base; Plates on top of back with space between them

PROTECTED SPECIES:

It is illegal by Virginia law to take sturgeon from Virginia waters. The short-nosed sturgeon, an endangered species, is also protected by federal law

INFORMATION NEEDED:

The Virginia Institute of Marine Science requests anyone who catches a sturgeon to measure its length (from tip of snout to fork in tail), and weight. Live fish should be returned to the water immediately; Dead fish held for pick-up by VIMS personnel. Date caught, location and type of gear should also be given.

CALL OR WRITE:

VIRGINIA INSTITUTE OF MARINE SCIENCE
Ichthyology - Sturgeon
Gloucester Point, Virginia 23062
(804) 642-2111 ext. 269

SERVICE APPROVES GILA TROUT RECOVERY PLAN

A recovery plan for the Endangered Gila trout (*Salmo gila*) was approved by the Service on January 12, 1979. The plan has as its prime objective improving the status of the trout to the point where its survival is secured. The plan calls for maintenance and enhancement of existing populations and habitat, re-establishing Gila trout within portions of its former range, dissemination of information on the species, assessment of Gila trout as a sport species, and transplanting individuals from seriously threatened populations to fish hatcheries.

Native populations of Gila trout are confined to five streams in the Gila National Forest, New Mexico, while two other streams in New Mexico and one in Arizona have transplant populations. It is the opinion of the Service-appointed recovery team for this species that each native population is unique, and efforts should be made to assure the survival of each.

The least vulnerable population occurs in Main Diamond Creek, home for nearly one-half of all Gila trout and source of the three transplanted populations. Less than 10,000 of the fish are thought to exist in these eight streams.

Readily identifiable by its iridescent gold sides which blend to a darker shade of copper on the opercles, the Gila trout has decreased in number because of hybridization with non-native salmonids, intense fishing activity, and changes in stream conditions.

The recovery team recommends selection of potential restoration streams and transplanting the Gila trout within its historical range. According to the plan, duplication of each population in at least one additional stream will more readily assure the species' survival. Mentioned in the plan are the possible transplants of the Spruce Creek population into the San Fran-

cisco River drainage, the Iron Creek population into the Middle Fork of the Gila River drainage, South Diamond Creek into the lower Gila drainage, and the McKenna Creek population into Little Creek.

Long-term survival and recovery will be aided by emphasizing this species' potential as a sport fish. The plan calls for the opening of some streams to public fishing as the Gila trout populations increase sufficiently to warrant downlisting from their current Endangered status.

The Gila Trout Recovery Team members are: Michael Hatch, Leader, New Mexico Department of Game and Fish; Paul Turner, New Mexico State University; Bruce Anderson, U.S. Forest Services; Bill Silvey, Arizona Game and Fish Department; and Dave Richter, U.S. Fish and Wildlife Service.

EXEMPTION APPLICATION PROCEDURES PROPOSED

In line with recently enacted amendments to the Endangered Species Act, the Departments of Commerce and the Interior have proposed procedures to be followed in applying for exemptions from compliance with the Act's protective Section 7 provisions (F.R. 2/7/79).

Section 7 of the Endangered Species Act requires all Federal agencies to insure that actions authorized, funded, or carried out by them do not jeopardize the continued existence of Endangered or Threatened species, or result in the destruction or adverse modification of designated Critical Habitat. Under the 1978 amendments, Federal agencies may apply for an exemption from the requirements of Section 7, when either Interior's Fish and Wildlife Service or Commerce's National Oceanic and Atmospheric Administration determine that the completion of proposed Federal actions may violate the Section 7 stipulations.

When such an irresolvable conflict arises from a finding of jeopardy by either Department, or when a request for a Federal permit or license is denied for reasons of jeopardy to a species or its Critical Habitat, this proposal provides the mechanism for obtaining exemption consideration under

conditions and procedures specified by Congress in the 1978 amendments. (For a discussion of the amendments, including exemption provisions and establishment of the cabinet-level Endangered Species Committee, kindly consult the October 1978 BULLETIN.)

Contained in these proposed regulations are definitions of terms in the new amendments, procedures for making application for exemption, procedures for the appointment of Review Boards, procedures for notification of the Secretary of State and the Council on Environmental Quality, and provisions governing the relationship between the two Departments and the Endangered Species Committee (including appointment of State members to both the Review Board and the Committee). (Operating procedures for the Review Board and Committee are not contained in this proposal, but may be issued under the Committee's separate authority.)

Concerning applications for exemptions, the following procedures are proposed:

- Applications must be made to the Secretary of Commerce or the Interior, as appropriate.

- Applications must be made by a Federal agency, the Governor of the

State in which the action will occur, or a person whose application to a Federal agency for a license or permit has been denied (primarily because of Section 7 regulations).

- Applications for exemptions for proposed Federal actions must be received within 90 days after termination of the consultation process and issuance of the biological opinion (required under regulations for inter-agency cooperation under Section 7), or within 90 days following the effective date of these application regulations (when the biological opinion was issued before the effective date).

- Applications for exemptions for actions involving the issuance of permits or licenses must be received within 90 days after the denial, or within 90 days after the effective date of these regulations (if denied before that date).

- Applications must contain the following information:

- (1) Applicant's name, address, and phone number, and name and phone number of individual to be contacted regarding the application.

- (2) A detailed description of relevant permit(s) or license(s) denied (if appropriate) by a Federal agency, including descriptions of the proposed

INDIANA BAT/GRAY BAT RECOVERY TEAM

The Indiana Bat/Gray Bat Recovery Team has been re-appointed to facilitate efforts aimed at aiding the two similar species. The team will be under the direction of the Service's Denver Regional Office, because most of the caves involved in planned land acquisition activities are located in Missouri.

The team will be primarily responsible for updating the In-

diana Bat Recovery Plan and preparing a recovery plan for the gray bat.

Team members are: Dr. Richard LaVal, Leader, Columbia, Missouri; Dr. Merlin Tuttle, Milwaukee Public Museum; Dr. Tom Kunz, Boston University; Dr. Don Wilson, National Fish and Wildlife Laboratory; and John Brady, U.S. Army Corps of Engineers.

activity, the applicable laws, steps taken by the applicant to obtain the permit or license, and the grounds given for denial by the involved agency.

(3) Except as required under (2), a comprehensive description of the proposed Federal action and the effect it may have upon listed species or their Critical Habitat.

(4) A detailed description of actions taken during the consultation process (in accordance with Section 7 regulations), including a copy of any biological assessment prepared and the biological opinion rendered.

(5) If the biological opinion was issued before the effective date of these regulations, a statement by the issuing agency that the opinion is still valid and sufficient under the Endangered Species Act as amended.

(6) A detailed description of any alternatives to the proposed action under consideration which would avoid an irresolvable conflict, including an explanation of why there are no reasonable and prudent alternatives to the action that would avoid such a conflict and why the proposed action cannot be modified to conform to the requirements of Section 7.

(7) A description of any resources committed to the proposed action by the affected Federal agency (or permit/license applicant), demonstrating that the agency or applicant has made no commitment that would foreclose "the formulation or implementation of reasonable and prudent measures that would avoid an irresolvable conflict."

(8) An explanation of why the benefits of the proposed action clearly outweigh the benefits of alternatives consistent with conserving the species or its Critical Habitat, and why the action is in the public interest.

(9) An explanation of why the action is of regional or national significance.

(10) A description of possible mitigation and enhancement measures (in-

cluding live propagation, transplantation, habitat acquisition and improvement, etc.).

The joint agency proposal also provides for the initiation of Review Board appointments immediately upon receipt of an adequate exemption application. Briefly, the Secretary will:

(a) appoint one member within 15 days of receipt of an application.

(b) notify the Governors of affected States in writing, requesting their recommendations for appointees which are then forwarded to the President by the Secretary for his consideration. (The President must appoint a resident from an affected State within 30 days after initial receipt of the application by the Secretary. When no State is affected, the Secretary will submit to the President a list of individuals with expertise relevant to the application, requesting that the President appoint an individual to the Review Board within 30 days of receipt of the application by the Secretary.)

(c) request the Office of Personnel Management to appoint an administrative law judge (also within 30 days). Following appointment of all three members, the Secretary will submit a copy of the exemption application to the Board.

(Similar procedures are to be followed in the appointment of a State member to the 7-member Endangered Species Committee, in that Governors of affected States are again asked to recommend individuals to the President for his consideration. A member from each affected State is to be appointed to the Committee by the President within 30 days (these members then having one collective vote). When no State is affected, a list of recommended individuals is again submitted by the Secretary for consideration by the President in selecting an individual to vote with the Committee.)

Within 60 days after receipt of an application, the Secretary's views on

the application are submitted to the Review Board (including recommendations as to the final disposition of the application).

Comments on these proposed regulations, due no later than April 9, 1979, should be submitted to the Assistant Secretary of the Interior for Policy, Budget and Administration, Department of the Interior, 18th and C Streets, N.W., Washington, D.C. 20240.

Pending adoption of final regulations, these proposed procedures will serve as guidelines and should be followed in the submission of exemption applications.

NEW PUBLICATIONS

The Hunt Institute for Botanical Documentation is preparing a *Register* which will account for specialists and research projects in systematic botany. Included will be computerized lists of specialists in Threatened and Endangered plant species, lists of specialists by plant taxa, and lists of specialists by geographic areas. Only U.S. Threatened and Endangered species are covered.

The first printed edition of the *Register* will be published in spring 1980. Copies will be sent to all who respond to a questionnaire by August 31, 1979. The form can be obtained from a convenient botanical institution or by writing to Hunt Institute, Attention *Register*, Carnegie-Mellon University, Pittsburgh, Pa. 15213.

Recent Changes in Distribution and Status of Wild Red Wolves (*Canis rufus*) was prepared under contract to our Service's Albuquerque Regional Office by Howard McCarley, Austin College, Sherman, Texas, and Custis J. Carley, U.S. Fish and Wildlife Service. Subtitled *Endangered Species Report 4*, the paper deals with the Red Wolf Recovery Program's objective of determining the location and abundance of each surviving red wolf subspecies. Three earlier reports prepared under contract with Region 2 are **The Leopard Darter** (A Status Report), **Status of the Texas Blind Salamander**, and **Status of *Trogloglanis pattersoni* Eigenmann, The Toothless Blindcat**. For more information write to U.S. Fish and Wildlife Service, P.O. Box 1306, Albuquerque, New Mexico 87103.

Rare Plants of the Ozark Plateau . . . a field Identification Guide, by Beverly
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New Publications

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J. Roedner and Keith E. Evans of the North Central Forest Experiment Station and David A. Hamilton, University of Missouri, is intended to stimulate the amateur botanist to look for these rare plants and provide notes on them and their habitats. For more information write to John H. Ohman, Director, North Central Experiment Station, U.S. Dept. of Agriculture, 1992 Folwell Avenue, St. Paul, Minnesota 55108.

New, Rare, and Infrequently Collected Plants in Oklahoma are discussed in a booklet published by the Herbarium, Southeastern Oklahoma State University. Copies are \$3.50 and may be ordered from Dr. R. John Taylor, Biology Department, Southeastern Oklahoma State University, Durant, Oklahoma 74701.

Endangered Plant Species of the World and Their Endangered Habitats:

A Compilation of the Literature, by Meryl A. Miasek and Charles R. Long, Library of the New York Botanical Garden, is an attempt to document worldwide efforts to list endangered plant species and their habitats. Over 600 literature citations are included in the book, which may be purchased for \$3.50 postpaid, from Library, The New

BOX SCORE OF SPECIES LISTINGS

Category	Number of Endangered Species			Number of Threatened Species		
	U.S.	Foreign	Total	U.S.	Foreign	Total
Mammals	33	227	260	3	18	21
Birds	67	144	211	3		3
Reptiles	11	47	58	10		10
Amphibians	5	9	14	2		2
Fishes	29	10	39	12		12
Snails	2	1	3	5		5
Clams	23	2	25			
Crustaceans	1		1			
Insects	6		6	2		2
Plants	20		20	2		2
Total	197	440	637	39	18	57

Number of species currently proposed: 158 animals
1,850 plants (approx.)

Number of Critical Habitats proposed: 73
Number of Critical Habitats listed: 33
Number of Recovery Teams appointed: 64
Number of Recovery Plans approved: 19
Number of Cooperative Agreements signed with States: 22

January 31, 1979

York Botanical Garden, Bronx, New York 10458.

The Colorado Division of Wildlife reports on the 25 species that are listed as threatened or endangered in the

State in **Wildlife in Danger**. For a free copy of this colorful booklet write to Colorado Division of Wildlife, Department of Natural Resources, 6060 Broadway, Denver, Colorado 80216.



ENDANGERED SPECIES TECHNICAL BULLETIN

Department of the Interior • U.S. Fish and Wildlife Service • Endangered Species Program, Washington, D.C. 20240



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