



UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
ECOLOGICAL SERVICES
3616 W. Thomas, Suite 6
Phoenix, Arizona 85019

2-21-92-F-628

August 6, 1992

MEMORANDUM

TO: Superintendent, Organ Pipe Cactus National Monument, Arizona

FROM: Acting Field Supervisor

SUBJECT: Biological Opinion, Research Project Entitled "Status and Conservation of the Rio Sonoyta Mud Turtle, Kinosternon sonoriense longifemorale, at Quitobaquito Springs, Organ Pipe Cactus National Monument, Arizona"

This responds to your request of July 22, 1992, for formal consultation pursuant to Section 7 of the Endangered Species Act of 1973, as amended, on a research project entitled "Status and Conservation of the Rio Sonoyta Mud Turtle, Kinosternon sonoriense longifemorale, at Quitobaquito Springs, Organ Pipe Cactus National Monument, Pima County, Arizona." The species of concern is the Quitobaquito subspecies of the desert pupfish (Cyprinodon macularius eremus). The 90-day consultation period began on July 24, 1992, the date your request was received in our office.

The following biological opinion is based on information provided in the July 22, 1992, biological assessment (BA), data in our files, and other sources of information.

BIOLOGICAL OPINION

It is my biological opinion that the proposed research project on the Rio Sonoyta mud turtle is not likely to jeopardize the continued existence of the desert pupfish and is not likely to destroy or adversely modify its critical habitat.

BACKGROUND INFORMATION

Species Description

The desert pupfish was listed as an endangered species on March 31, 1986. Critical habitat for this species was designated at Quitobaquito Spring and at three locations in Imperial County, California. The desert pupfish is a small fish historically common throughout much of the lower Gila River system, the lower Colorado River system, and the Rio Sonoyta system in Arizona, California, and Mexico (Minckley 1973). The desert pupfish is presently known to occur naturally in only four localities in California and Arizona and in the Rio Sonoyta, Laguna Salada, and lower Colorado River delta in Sonora and Baja California, Mexico (Black 1980, Miller and Fuiman 1987, Schoenherr 1988, Hendrickson and Varela 1989). Decline of the desert pupfish is due to human alterations of its habitat such as water impoundment, water diversion, stream downcutting, backwater draining, vegetation clearing, channelization, groundwater pumping, pesticides, and introduction of predatory and competitive nonnative fishes.

Project Description

The proposed project would involve research to obtain information on the Rio Sonoyta mud turtle (*Kinosternon sonoriense longifemorale*) at Quitobaquito Springs, Organ Pipe Cactus National Monument, Pima County, Arizona. Trapping would be carried out for Rio Sonoyta mud turtles in October 1992 and two to three times in 1993. Each trapping period would last for four to ten days and would be carried out as specified in the protocol set forth by Rosen (1986). All captured turtles would be marked and measured with full autecological data recorded. Approximately 20 minnow traps would be set along the perimeter of Quitobaquito Pond. Traps would be checked at a minimum of twice per day. Desert pupfish captured in these traps would be released after each trap inspection.

Searches for dead turtles would be conducted twice-monthly to monitor mortality. During the summer nesting season, small transmitters would be attached to adult female turtles to locate nest sites, monitor hatching success, determine clutch frequency, and other reproductive parameters.

The study would be conducted by Philip Rosen, University of Arizona in conjunction with Michael Kunzmann and Peter Bennett from the National Park Service. Field assistants would be used as well as personnel from Organ Pipe National Monument.

EFFECTS OF THE ACTION

Traps used in the proposed study of Rio Sonoyta mud turtles would also trap desert pupfish. Full-sized traps that would be used to trap adult turtles are too large to capture desert pupfish; however, the traps used to capture juvenile turtles would also trap and hold desert pupfish. These traps are similar to those used in the annual census conducted by the National Park Service (NPS) on desert pupfish at Quitobaquito. Results of that census indicate that mortality from trapping would be very low. The most recent census of desert pupfish at Quitobaquito Pond captured 2,617 desert pupfish with a mortality of 11 individuals (NPS 1991).

Expected effects of the proposed study on the Quitobaquito subspecies of the desert pupfish are expected to be minimal. No habitat alteration or destruction will occur and fish mortality, if any occurs, will not have substantial adverse effects to the subspecies.

INCIDENTAL TAKE

Section 9 of the Act, as amended, prohibits any taking (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct) of listed species of fish and wildlife without a special exemption. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering. Under the terms of Section 7(b)(4) and Section 7(o)(2), taking that is incidental to, and not intended as part of, the agency action is not considered a prohibited taking provided that such taking is in compliance with the incidental take statement. **The measures described below are nondiscretionary, and must be undertaken by the agency or made a binding condition of any grant or permit issued to the applicant, as appropriate.**

The FWS anticipates that the proposed study of Rio Sonoyta mud turtle will result in incidental take of less than 25 desert pupfish through direct mortality from trapping and handling.

If, during the course of the action, the amount or extent of the incidental take limit is reached, the NPS must reinitiate consultation with the FWS immediately to avoid violation of Section 9. Operations must be stopped in the interim period between the initiation and completion of the new consultation if it is determined that the impact of the additional taking will cause an irreversible and adverse impact on the species, as required by 50 CFR 402.14(i). The NPS should provide an explanation of the causes of the taking.

Reasonable and Prudent Measures

The FWS believes the following reasonable and prudent measures are necessary and appropriate to minimize the incidental taking authorized by this biological opinion.

1. Conduct the proposed study in a manner which will minimize trapping and incidental take of desert pupfish.
2. Maintain complete and accurate records of actions which may result in take of desert pupfish.

Terms and Conditions for Implementation

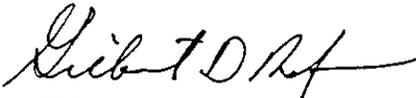
In order to be exempt from the prohibitions of Section 9 of the Act, the NPS is responsible for compliance with the following terms and conditions which implement the reasonable and prudent measures described above.

1. The proposed study shall be carried out as outlined in the July 22, 1992 biological assessment.
2. A final report of the project shall be furnished to the FWS upon completion of the project. The report shall include information on incidental capture, release, and mortality of desert pupfish occurring during the study.

CONCLUSION

This concludes formal consultation on the actions outlined in the July 22, 1992 consultation request. As required by 50 CFR 402.16, reinitiation of formal consultation is required if: (1) the amount or extent of incidental take is reached; (2) new information reveals effects of the agency action that may impact listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this opinion; or (3) a new species is listed or critical habitat designated that may be affected by the action.

If we can be of further assistance, please contact Sally Stefferud or Ren Lohofener (Telephone: 602/379-4720).


Gilbert D. Metz

cc: Director, Arizona Game and Fish Department, Phoenix, Arizona
Regional Director, Fish and Wildlife Service, Albuquerque, New Mexico
(AWE)
Director, Fish and Wildlife Service, Washington, D.C. (HC)

LITERATURE CITED

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- Hendrickson, D.A., and A. Varela-Romero. 1989. Conservation status of desert pupfish, Cyprinodon macularius, in Mexico and Arizona. *Copeia* 1989(2):478-483.
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