DEPARTMENT of the INTERIOR

news release

FISH AND WILDLIFE SERVICE

For Release April 29, 1976

McGarvey 202/343-5634

THREATENED OR ENDANGERED SNAILS--GAUGES OF MAN'S IMPACT

Snails are nowhere as glamorous as timber wolves or grizzlies to most people, but their ultimate value as strain gauges measuring man's grinding impact on widespread river systems, desert areas, and other ecosystems may far outstrip the contributions made by larger animals. Moreover, snails are potentially very significant in the development of an anti-cancer drug.

With this in mind the Interior Department's U.S. Fish and Wildlife Service has proposed 32 land and freshwater snail species native to California, the Southeast and the Southwestern United States for inclusion on the list of threatened and endangered species. This proposal appeared in the April 27, 1976, issue of the Federal Register. Public comments are invited through June 25, 1976.

Other proposals will follow as studies are completed on the 2,000 different species of inland, non-marine snails in the country. Scientists estimate that as many as 20 percent or 400 of these species may be found to be threatened or endangered.

These fragile species are particularly valuable to ecologists because they serve as accurate indicators of the overall health of an ecosystem, be it a river, a desert, a prairie, or a forest. If their existence can be assured, then the health of the entire ecosystem can be gauged accurately

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on the microscopic, plant, fish, bird, mammalian, and aquatic organism levels. This enables man, who also is dependent upon healthy ecosystems for his continued well being, to better guide his destiny.

Snails are an indispensable part of the living world. Land snails are particularly significant in the life cycle of many bird species, and freshwater snails are important in the fish world's food chain.

Recently these creatures also have been recognized by chemical zoologists as uniquely adaptable organisms that may very well hold a substance that could contain a cure for cancer. Snails and other mollusks rarely get cancer, and chemical zoologists have isolated a substance named Mercenene from a clam. This substance is thought to cause the metabolic and biological defense against this disease in certain mollusks and it is felt that similar substances are present in other mollusks, including snails. In laboratory tests Mercenene has inhibited the growth of certain cancers in mice, and it is believed to have no side effects on human tissue.

In addition to these properties, research on snails also has shown them to be remarkable organisms whose systems can produce a wide variety of poisons, antibiotics, tranquilizers, antispasmodics, and antiseptic chemicals. Lodged in one place and restricted in food source and movements, the species that have survived to the present day are remarkable for their abilities to adapt to natural environmental changes such as fires or floods, but not acid mine wastes, municipal wastes, soil runoff, pesticides, and other man-caused threats to their existence.

Of the 32 species proposed for listing, 15 are proposed as endangered and 17 as threatened. The "endangered" proposals involve species which are restricted to a very small area or those that occur in such small numbers as to be in immediate danger of extinction. The "threatened" proposals are for species that occur over a wider range or in larger numbers, and that face a less imminent threat over most of their range.

These 32 species are found in 14 States. They are:

STATE	COMMON NAME	COUNTY
Arkansas	Magazine Mountain Middle-toothed Land Snail	Logan
	Pilsbry's Narrow Apertured Land Snail	Polk
	Strange Many Whorled Land Snail	Izard/Stone
California	Amargosa Snail	Inyo
	Bad Water Snail	Inyo
	Banded Dune Snail	San Luis Obispo
	California Northern River Snail	Ventura/Los Angeles
	Dented Peninsula Snail	Marin
	Fraternal Snail	Ventura
	Karok Indian Snail	Humboldt
	Nicklin's Peninsula Snail	Marin
	Rocky Coast Snail	Del Norte
	Slug Snail	Los Angeles
	Tryon's Snail	Ventura/Los Angeles
Florida	Stock Island Tree Snail	Monroe
Iowa	McClintock's Discoid Land Snail	Clayton
Nevada	Amargosa Snail	Nye
	Ash Meadows Turban Snail	Nye
	Muddy Valley Turban Snail	Clark
	Pahranagat Valley Turban Snail	Lincoln
	White River Snail	Clark/Lincoln/Nye
New Mexico	Socorro Snail	Socorro
New York	Chittenango Ovate Amber Snail	Madison
North Carolina	Clark's Nantahala Middle-toothed Land Snail	Swain
	Jones' Middle-toothed Land Snail	Swain
Oklahoma	Pilsbry's Narrow Apertured Land Snail	LeFlore
Tennessee	Painted Snake Coiled Forest Snail	Franklin
Texas	Cheatum's Snail	Reeves
	Diamond-Y Pond Snail	Pecos
	Reeves County Snail	Reeves
Utah	St. George Snail	Washington
	Zion Canyon Snail	Washington
Virginia	Virginia Fringed Mountain Snail	Pulaski
West Virginia	Flat Spired Three-toothed Land Snail	Monongalia

A determination that any of these species are threatened or endangered will provide that species legal protection from collectors, and will require Federal agencies to insure that actions they authorize, fund, or carry out do not jeopardize the continued survival of the species.

Comments should be addressed to the Director (FWS/LE), U.S. Fish and Wildlife Service, P.O. Box 19183, Washington, D.C. 20036.

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INT: 4754-76