# I.U.C.N. TORTOISE GROUP NEWSLETTER

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## EDITORIAL

The IUCN Tortoise Specialist Group was established in 1981, and held its inaugural meeting at Oxford in October of that year. To date, the Group has issued a number of reports, bulletins, and policy statements, but this is the first attempt at a newsletter. We hope that this will be, if not a regular undertaking, at least an ongoing one. The first number has been composed from items in the Editor's files, but clearly the newsletter will only continue if contributions from Group Members and others are received. We propose that the newsletter include information regarding all members of the family Testudinidae, plus certain terrestrial members of the Emydidae that fall outside the purview of the Freshwater Turtle Group. We do not propose to exclude any contributions that relate to new information on tortoises, but it is our suggestion that the emphasis be on questions of conservation, management, and survival status, particularly of the rarer forms. While strictly scientific information may also be included, it is anticipated that this will generally take the form of preliminary notices of data that will be published in full elsewhere. Bear in mind that this is not a refereed journal, and we do not wish to compete for contributions with such publications. In addition to current information about tortoises, we will be glad to receive "news" items encompassing new or prospective tortoise research and conservation activities, and information on legislation or regulations that affect tortoise conservation, and it would certainly be desirable to maintain a "current literature" section. However, for the latter it is important that the Editor receive reprints of new publications from the authors, and notices of availability of new books. It would also be extremely helpful if readers who discover new articles about tortoises in obscure journals would bring them to the Editor's attention.

## MADAGASCAR TORTOISE NEWS

Geochelone yniphora is probably the rarest full species of tortoise in the world, and action to promote its survival and recovery has been a high priority of the Tortoise Group since its inception. Confined to the area around Baly Bay in northwestern Madagascar, Juvik et al., 1980-81 (Biol. Conserv., 19: 297-316) found that, even within the heart of the habitat, only one specimen could be located per 75 man-hours of searching, and they estimated that only 20 specimens had been received by scientists in the 20th century. An expedition to Madagascar in 1983, led by David Curl, resulted in a very slightly more optimistic evaluation of the population status, the wild population being estimated at around 200 (100-400) individuals, while a surprising total of 50 animals was thought to be held in captivity by villagers. However, poor survival of the captive tortoises and ongoing collection of wild individuals for food gave little ground for optimism.

A two-pronged approach including establishment of a natural reserve within the

habitat of the species and a program of captive breeding are necessary to save G. yniphora. While groups of between two and five individuals are held in at least three locations, only a single specimen has been hatched in captivity. This success occurred at the Honolulu Zoo in September, 1983, after artificial insemination of a female that had produced 25 infertile eggs. The Honolulu Zoo received the Edward H. Bean award for this breeding success.

The other large Malagasy tortoise, Geochelone radiata, is not nearly as rare as G. yniphora, but is still considered an endangered species. Confined to southernmost Madagascar, this beautifully marked species owes its survival to the inpenetrability of much of its thorn-forest habitat and the religious beliefs of the Antandroy tribesmen, who tradionally have venerated the tortoises and refrained from eating them. Nevertheless, smuggling for the pet trade occurs (a recent shipment of live radiated tortoises was intercepted in Hong Kong and deposited at the Jersey Wildlife Trust), the tortoises continue to be eaten by urban people in Madagascar, and there is even considerable interest in this species for food outside Madagascar. Sean McKeown of the Fresno Zoo (California) reports that certain ethnic Chinese dealers in La Réunion have up to 100 adult radiated tortoises in captivity, with significant amounts of captive breeding taking place. The tortoises are sold (at high prices) for food.

Meanwhile, captive breeding for conservation purposes has proceeded considerably further than it has with G. yniphora. The breeding program at the Gladys Porter Zoo in Brownsville, Texas, under the direction of Patrick Burchfield, has bred successfully each year since 1973. Although only about 25% of the eggs produced are fertile, this captive group of 4 ♂, 5 ♀ adults has produced 66 hatchlings, of which at least 60 are still alive, and 36 of them still held at the Gladys Porter Zoo. Captive breeders of this species may be helped by the extreme longevity of G. radiata. In addition to the famous individual "Tui Malila," which allegedly lived in captivity on Tonga from 1773 or 1777 to 1965, a still-living specimen by the name of "Torty," resident at Alexandra Park Zoo in Bundaberg, Queensland, Australia, was presented as a hatchling to John Powe in 1847. One of the very few testudinids resident in Australia, where the family does not occur naturally and where imports of exotic animals are prohibited, "Torty" has the typical appearance of the species except that no trace remains of the radiating pattern on the carapace scutes.

## INDONESIAN TORTOISE NEWS

If G. yniphora is the world's rarest tortoise species, the least-known is surely the Indonesian tortoise, Indotestudo forsteni. Only reported from the islands of Sulawesi (Celebes) and neighboring Halmahera, for several decades nothing new was published about this enigmatic form, apart from speculations that it might be based on introduced specimens of the Indian species I. travancorica. The first new information was that of Brian Groombridge, who, in the 1982 IUCN Amphibia-Reptilia Red Data Book, reported that W.H.Timmis of the Harewood Bird Garden, Leeds, England, had recently encountered four specimens in or near the Morowali Reserve in central Sulawesi. Then in 1984, Pet Farm, a major wildlife imported in Miami, Florida, received a consignment of about 60 live tortoises from a Jakarta exporter. These were reportedly collected in Sulawesi. Several of the animals died and have been deposited in the Florida State Museum. Examination of the Pet Farm specimens by Peter Meylan and independently by the Editor confirmed that they were definitely Indotestudo; the specimens all seemed referable to the same species even though about equal numbers possessed or lacked the nuchal scute (in I. travancorica the nuchal is generally lacking; it is generally present in I. elongata). In coloration the tortoises seemed closer to I. elongata than to I. travancorica, but had less plastral pigmentation and more carapacial pigmentation than is typical of I.

elongata, the dorsal pigmentation consisting of a large black blotch on each vertebral and costal that covered the greater part of the scute.

Meanwhile, M. Hoogmoed and C. Crumly (1984: Zool. Mededel., Leiden, 58 (15): 241-259) recently examined all available museum specimens of I. forsteni. They located only five, in four museums. They concluded that neither shell pigmentation nor gular scute proportions clearly differentiated the Indonesian tortoises from either of the Asiatic species of Indotestudo, but that, since the Indonesian specimens lacked the nuchal scute, they were different from I. elongata but inseparable from I. travancorica. The latter conclusion then led to the synonymization of I. travancorica with I. forsteni -- a very confusing step but one apparently rendered unavoidable by the fact that I. forsteni was described 67 years earlier than I. travancorica.

The new data are exceedingly interesting, but clearly clarification of both the taxonomic and the survival status of I. forsteni must await thorough field work in Sulawesi and Halmahera (the latter island actually being the type locality even though only one recorded specimen was collected there).

## TESTUDO KLEINMANNI IN EGYPT AND ISRAEL

The Egyptian tortoise Testudo kleinmanni is one of the smallest of the Mediterranean tortoises (males averaging 93.2 mm and females 157.7 mm), and is morphologically distinctive in several ways, being included in a monotypic subgenus, Pseudotestudo. It has a narrow range extending from the western Negev in Israel through northwestern Sinai to northern Egypt and western Libya. However, its habitat requirements are demanding and its range is highly discontinuous. H. Mendelsson of the Tortoise Group estimates that there are only 400 sq. km. of habitat for the species in Israel, of which half is in a reserve that unfortunately is also used for military exercises. Even in good habitat there are only 4-5 T. kleinmanni per sq km. Threats to the species include destruction of the already very scant plant cover of the habitat by grazing herds, the low reproductive rate (1-3 eggs per year), and probably non-breeding in drought years.

A recent unpublished report by Jim Buskirk of Oakland, California, has drawn attention to numerous threats to T. kleinmanni in the heart of its range. Buskirk found no wild T. kleinmanni during two weeks in Egypt in April 1984, but saw about 200 individuals (for some reason almost all males) offered for sale in three Cairo pet shops. These animals, priced at $8 to $15 US, had reportedly been collected in Sinai; they were in very poor condition. Numbers of this species were also seen at the Giza Zoo, though they reportedly did poorly there, soon dying of a "wasting disease." The zoo group sometimes produced eggs that subsequently hatched, but the young had never survived for more than a year. At Buskirk's suggestion, some substantial improvements were made in the conditions under which the tortoises were kept at the zoo.

Testudo kleinmanni is theoretically completely protected under a new statute in Egypt (Law no. 102), but although this results in no permits being issued for export, it does not control extensive use of the tortoises within Egypt, either for sale as pets or for research. One scientist at the University of Cairo had utilized as many as 200 T. kleinmanni for haematological research, obtaining the blood specimens by decapitation and discarding all the sacrificed specimens after use, without even maintaining records of the origin, sex, or other parameters of the tortoises.

## SHIFTING PATTERNS OF THE TORTOISE TRADE

Now that commercial importation of the Mediterranean tortoises Testudo graeca T. hermanni, and T. marginata is essentially prohibited in the EEC countries (western Europe), there is evidence that the demand is being met by increased importation of other species. It appears that Testudo horsfieldi (native to the USSR, Pakistan, and Afghanistan) is being imported in substantial numbers, while a recent RSPCA report indicates that North American box turtles (Terrapene carolina ssp.) are being imported into the UK in considerable numbers for the pet trade. Meanwhile, certain of the Mediterranean species (especially T. graeca and T. hermanni) are appearing in increasing numbers in the United States.

While none of these species is considered endangered, the trade is undesirable in that it could quickly lead to at least localized extirpation of tortoise and box turtle populations. Moreover, neither Testudo horsfieldi nor Terrapene carolina does particularly well in the British climate, while Testudo graeca and T. hermanni, although often kept successfully in the western United States, do not usually flourish in the much more humid eastern states.

The Editor would appreciate contributions from readers to quantify these shifts in the tortoise trade.

## ENDANGERED STATUS PROPOSED FOR NORTH AMERICAN TORTOISE POPULATIONS

R. Lohoefener and L. Lohmeier of Mississippi State University Research Center recently conducted a survey of populations of Gopherus polyphemus in the western part of its range (i.e. in Louisiana, Mississippi, and Alabama west of the Tombigbee and Mobile Rivers). It was found that tortoises in this area were so few and dispersed, and subject to such threats from human and animal predation, highway mortality, and habitat alteration, that the species should be considered endangered throughout the area. A petition to this effect has been submitted to the United States Department of the Interior, and is currently being evaluated.

Populations of the Desert Tortoise (Xerobates agassizii) are also the subject of current concern. This species occurs in the states of California, Arizona, and Nevada, and in Edo. Sonora, Mexico, with marginal populations known in southwestern Utah and northern Sinaloa. The Utah population is already considered endangered by the US dept. of the Interior. On September 11, 1984, petition was made by several Washington-based conservation organizations to list the Desert Tortoise as an endangered species throughout the remainder of its US range. Even though this is one of the few New World tortoise species rarely utilized for food, a major, 838-page report entitled The status of the Desert Tortoise (Gopherus agassizii) in the United States documents the massive decline that this species has experienced, as a result of collecting, vandalism, habitat loss, grazing, cactus rustling, fires, use of off-road vehicles, mining, military activities, urbanization, agricultural development, highway construction, and development of utility and transmission corridors. Federal listing should help this spoecies, since approximately 70% of its US habitat is under federal ownership.

## SOME RECENT LITERATURE

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