

Turtle Conservation by ARCO Nepal

Door: H. Schleich

The Turtle Conservation Project

In 1997 ARCO Nepal was founded to support conservation strategies for the endangered turtle fauna of Nepal. The recorded turtle species from Nepal are so far only known from the subtropical lowland area of the Terai including the Siwaliks and the Gangetic Plain. Neither from Pokhara and comparable altitudes nor from the central Kathmandu basin turtles are known. Turtles are caught anywhere in the lowlands, and the highest catch rate is concentrated at the bigger dams in the main river systems where generally fishing or even a fishery industry are present.

In Nepal all turtle species are under tremendous pressure of extinction from professional fishermen, tribal people, children and cursory collectors searching also fish or snails. People keep terrapins and tortoises as pets, to make use of any part of them, either for its meat or for shell preservation. A ridiculous practice is turtle killing for the production of tourist masks, to be sold in hundreds mainly at Kathmandu's Durbar Marg tourist market.

In the year 2002 four field trips were carried out by a doctorate candidate to find turtles in East Nepal but without any success (in lit: T. Timsina, November '02) while Rai & Schleich still report new turtle records for Nepal with *Pangshura tentoria circumdata* and *Cycllemys oldhamii* in the same year (Schleich & Kastle, 2002).

Activities of ARCO-Nepal

A Master and Action plan was elaborated by Schleich (see Schleich & Maskey 1998) and important steps of it realized by ARCO-Nepal and are monitored continuously in the Annual Reports of ARCO-Nepal (www.fuhlrott-museum.de/ARCO-Nepal) that are distributed free to the members.

The activities of ARCO concentrate on monitoring potential habitats mainly wetland systems, all National Parks of the Terai,

teaching at the Tribhuvan university and National Parks, publication and awareness campaigns in Nepal and abroad.

Publications

Amongst others one big aim was to publish a first handbook on the herpetology of Nepal that had been issued since November 2002 covering all latest new records, results and investigations on 1200 pages with more than 2000 line drawings, distribution maps and hundreds of colour photographs. Also the dissertation thesis by C. Anders on the amphibians of Nepal (in German) has been published at Fuhlrott-Museum & Research Institute in November 2002, covering more than 600 pages. Over 290 pages new or widely unknown species and studies on their biology are presented in "Contributions to the Herpetology of South Asia (Nepal, India)" by Schleich & Kastle (eds.) in 1988.

Mainly the handbook shall help to contribute gaining better knowledge for schools, universities and the staff of Department of National Parks and Wildlife Conservation (DNPWC). Regrettably another book was printed under the title "Herpetology of Nepal * A Field Guide to Amphibians and Reptiles of Trans-Himalayan Region of Asia" in 2001 by T.K. Shrestha and gives again a lot of wrong information and misidentification even e.g. on CITES I specimen *Melanochelys tricarinata* erroneously identified as *Kachuga tecta*. This book by Shrestha is one of several books on various subjects he published, but a pity for the lost chance.

A children's text and painting book was also published by ARCO-Nepal focussing on the turtles of Nepal as a first pedagogical approach together with turtle poster campaigns at schools, parks and public places throughout whole south of the country from east to west. Another set of four posters covering amphibians, snakes, turtles, crocodiles,



and lizards was printed for distribution and sale last year. A first exhibition on amphibians and reptiles from Nepal was presented at the Zoo in Kathmandu and afterwards finally transferred for permanent exhibition to the Natural History Museum at Swayambunath. Another exhibition was developed as "migratory exhibition" to be displayed at various sites in Europe for the promotion of ARCO-Nepal & Fuhlrott-Museum.

Since four years Mr Kalu Ram Rai from East Nepal is employed as ARCO-Nepal representative in Nepal and has just recently finalised and presented his Ph D thesis entitled "Environmental Impacts, systematics and distribution of Herpetofauna from East Nepal".

As from the beginning of this year a student from Berlin University carries out her master thesis at Royal-Chitwan National Park Turtle Conservation Centre to install husbandry and breeding conditions amongst others.

The preparation of a Red data Book on the herptiles of Nepal in collaboration with DNPWC is foreseen soonest.

Education and Training

Although the publications and activities mentioned above shall contribute to education and are useful, but still manifold special trainings and education programs are urgently needed. The existing knowledge on amphibians and reptiles of Nepal, even amongst university professors, is frighteningly weak, and new discoveries during last years were common. Lecture programs at Tribhuvan University and DNPWC were realized and shall be presented also in next future. A still unrealised desire is to contribute to school education with the acquainted material and also with a new field guide for the amphibians and reptiles that should be published bilingual in English and Nepali next year.

At Kasarah Headquarter a new Education Centre will contribute to the knowledge of Nepal's wildlife and focus on education programs as well as a permanent exhibition planned for next year.

Situation in Parks and Protected areas

So far we could not find any terrestrial turtle populations worth mentioning but we receive continuous reports from various locals and also by the sale activities of fishermen at Koshi Tappu barrage. The new locality from which we could report *Cyclemys* does not yield recognisable populations but single specimens are caught by locals for food. Softshells may still be somewhat more common -also in the sense of viable populations- e.g. in Godah-Godhi Lake or along the big river systems adjoining the National Parks.

Royal Chitwan National Park

The Royal Chitwan National Park (RCNP) contains several habitats favourable for terrapins and tortoises. There are records for Emydidae and Testudinidae but detailed studies are still lacking. The RCNP headquarters provide good facilities for investigation, training and breeding especially when being converted to the planned Education Centre next year.

The Turtle Conservation Centre attached to the Gharial Project Area, since two years planned by ARCO and realized by DNPWC is now finalized.

Last year the first tortoises, softshells and terrapins were transferred by ARCO-Nepal and even a donation of 3 *Indotestudo* specimens from the Patan temple was possible. There are two big ponds and one bigger area for terrestrial turtles as *Indotestudo* and *Melanochelys tricarinata*.

Since this year as one result of the encouraging work by Mrs Doreen Dubau in the course of her master thesis now 50 specimens are inhabiting the station, and at least for *Indotestudo* it looks as if the first breeding stock can be established. We are looking forward to have offspring next year.

Koshi Tapu Wildlife Reserve

The area of Koshi Tapu Wildlife Reserve is continuously under tremendous pressure from fisheries based outside the parks but also by poaching within its boundaries. A thorough



study shall be the basis to start the proposed project. It is to mention that this is the place where most turtles are caught, killed and sold most probably for whole Nepal, and where poaching is a daily practice supported by the close proximity of the Indian borderline. In future two small ponds shall receive renovation and fencing to serve as quarantine station for confiscated turtles from local dealers.

Parsah Wildlife Reserve

Due to the Park's nature only terrestrial turtles are to expect. Data is lacking.

Bairdia Wildlife Reserve

Bairdia Wildlife Reserve (BWR) contains several habitats appropriate for terrapins and tortoises. So far *Melanochelys tricarinata* and *M. trijuga*, *Indotestudo elongata*, *Chitra indica*, *Lissemys punctata* and *Aspideretes hurum* are recorded. Excellent sighting of rather huge softshells and both crocodile species is possible from the Babai bridge at the entrance of the National Park.

A small enclosure needs urgent improvement to serve for better handling and maintenance for the turtles existing yet at the headquarter station.

Suklaphantah Wildlife Reserve

Suklaphantah Wildlife Reserve (SWR) is utmost interesting for its still unstudied turtle fauna. It is situated in the extreme Far West of Nepal and thus possibly contributing new knowledge on the biogeography of Testudines in South Asia. The discussion for renaturation and cleaning of the desiccating lake has recently be initiated by ARCO-Nepal and could perhaps best be realized as Community District people's program.

So far we only got hints of a 100 kg *Aspideretes* caught a few years ago in that drying lake. The specimen was killed and sold to a merchant from India.

Godha Godhi Tal

Yet not established as Wildlife Reserve by Nepalese government but an extremely valuable wetland area that needs most urgently protection status and scientific investigation.

Search for ARCO collaborators in Nepal and volunteers abroad

One problem is the lack of experienced persons with the expertise for fieldwork, husbandry and breeding, administrative work and the scientific background. Happily ARCO can acknowledge the help and support of authorities like both the Ambassadors for Nepal and for Germany, the former Director General of National Parks and Wildlife Services and a few others.

It seems that at least, for Central and East Nepal we are able to enhance the chances for a future realisation of turtle conservation.

In Central Nepal a first turtle Conservation Centre has been established since 2000 and first stocking began since 2001.

But we need a stable staff for the coming years to take care of the turtles inhabiting the centre, and others to continue monitoring the few places in South Nepal where turtles still exist.

Turtle species mentioned for Nepal

The present knowledge from literature does not present a clear picture of the turtle distribution or even their presence in Nepal. The recently published maps on distribution by Iverson (1995) and Boni et al. (1996) render wrong data concerning the real situation of key species. The following ones are mentioned by these authors in the southern regions of the country but existence of photo documentation or voucher specimens is unclear:

Taxonomy Distribution in Nepal accordingly:
Author (* = mentioned for Nepal)

Iverson Bonin et al.
others



Chitra indica
 central bordering *west - east
Lissemys punctata
 central (east) bordering *west - east
Aspideretes hurum
 central bordering
Aspideretes gangeticus
 central "southern Nepal"
Geoclemys hamiltoni
 (central) probably *north-east
Hardella thurjii
 (central, west) probably *east
Kachuga dhongoka
 central Ganges drainage *
Kachuga kachuga
 central, east probably
Kachuga smithii
 central bordering *south-east
Kachuga tecta
 central, west probably text yes, map no
Melanochelys trijuga
 central bordering *south-south-west
Melanochelys tricarinata
 central possibly
Morenia petersi
 central bordering south
Indotestudo elongata
 bordering

Other turtle species are supposed to occur also in Nepal due to their known distribution in adjacent areas in India, but proved records are not available: *Geoclemys hamiltoni*, *Hardella thurjii*.

In total we might expect 16-18 different species within the state boundaries of Nepal.

The following table presents only proved records and occurrences of turtles in Nepal and may serve as a basis for future recordings to be enhanced:

Taxonomy habitats where turtles were already found in Nepal

Trionychidae - Soft Shell turtles, Pond Turtles, River turtles

Chitra indica - big rivers
Lissemys punctata - ponds, swamps, lakes, paddy fields

Aspideretes hurum - rivers, ponds
Aspideretes gangeticus - rivers

Bataguridae - Asian terrapins

Geoclemys hamiltoni - yet not found
Hardella thurjii - yet not found
Cyclemys oldhamii - wetland, streams in juveniles and moist areas in adults
Kachuga dhongoka - rivers
Kachuga kachuga - rivers
Pangshura flaviventer - rivers
Pangshura smithii - rivers
Pangshura tectum tectum - Lumbini tank
Pangshura tentoria circumdata - rivers
Melanochelys trijuga - swamps, ponds,
Melanochelys tricarinata - swamps, paddy fields, forests
Morenia petersi - swamps, ponds

Testudinidae - Terrestrial turtles, tortoises

Indotestudo elongata - forests

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Yellow-bellied roofed turtle (*Pangshura flaviventer*)



Yellow-headed tortois (*Indotestudo elongata*)

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Indian peacock softshell turtle (*Aspideretes hurum*)

