

FRIENDS of the Giant Otter

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Editorial

In a continent as vast as South America, where a single country, Brazil, is almost as large as the whole of Europe, and where giant otter researchers number less than 30 individuals (that's being optimistic!!), it is not surprising that opportunities for us to meet and discuss our projects and ideas are both rare and highly rewarding. The December 2003 workshop in the Brazilian Pantanal demonstrated once again the value of such meetings in helping to create a sense of cohesion, of working together towards a series of well-defined goals, the overall one being the conservation of giant otters. In 2004, we are fortunate to have two further opportunities to meet, at the IXth International Otter Colloquium in Frostburg, USA, and at the 11th Workshop of Aquatic Mammal Specialists of South America in Quito, Ecuador. Let's make the most of them!!!

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PROJECT UPDATES & NEW INITIATIVES

PERU Giant otter population census in the River Heath watershed

The River Heath basin collects waters arising in Peru as well as Bolivia. In effect, this river not only forms the border between the two countries but is also the limit between two of the most extensive protected areas in the Amazon: the Bahuaja Sonene National Park and Tambopata National Reserve, Peru, and the Madidi National Park, Bolivia.

In August 2003, twelve years after Christof Schenck first investigated the area, a team of four individuals (Raphael Notin and Kimberly Failor, biologists; Dario Cruz, field assistant; and Remberto Chihuapuri, Madidi National Park gamewarden) carried out a giant otter population census along the Heath, applying the methodology presented in the 4th draft of “Standard Field Survey Techniques for the Giant Otter (*Pteronura brasiliensis*)”, Groenendijk, J., *et al.* (in prep.).

The journey had a total duration of four weeks, travelling upriver by ‘peque-peque’ for two and a half weeks, to parts increasingly more pristine. We entered 37 oxbow lakes and 3 streams within the study area, using an inflatable boat. A total of at least 42 different giant otters were observed and their neck markings filmed; clearly, an important population has been identified for south-eastern Peru.

The Frankfurt Zoological Society Giant Otter Project was able to collect this data in the heart of the Vilcabamba Amboro Conservation Corridor, thanks to a bi-national collaboration between staff of the protected areas, and with logistical assistance from the Wildlife Conservation Society, Bolivia.

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PERU Distribución del lobo de río en el Departamento de Ucayali

Between August and December 2003, a study of the distribution of the giant otter in the department of Ucayali, central Peruvian Amazon, was carried out, not only with the aim of elaborating upon existing, scarce information on distribution of the species in the area, but also to test survey guidelines proposed in the 3rd draft of “Standard Field Survey Techniques for the Giant Otter” (Groenendijk *et al.*, in prep.). These included quadrant size (30’x30’ or 15’x15’ lat./long.), number of survey sites per quadrant, site survey distance, and criteria for site selection. The study was financed by the Frankfurt Zoological Society Giant Otter Project.

A total of 12 rivers were investigated in the Ucayali department, along which 9 squares of 30’x30’ and 25 quadrants of 15’x15’ were surveyed, one site per 15’x15’ quadrant. In each site (whether rivers or lakes), we attempted to cover a standard survey distance of 30 km. On rivers, both banks were surveyed while on lakes the entire perimeter was explored in the majority of cases.

Nine of the 15’x15’ quadrants (4 of the 30’x30’ squares) were identified as positive for the presence of giant otters (based on direct as well as indirect signs). Of the 25 sites surveyed (rivers and lakes), in every case it proved to be impossible to cover the full survey distance, due to low water level, obstacles in the water course, personal danger (posed by armed loggers, fishermen, miners etc.), or because the total perimeter did not amount to the full distance (on lakes). In all positive survey sites (n=9), the stop-at-first-sign survey distance

was less than 12 km. Of the 51 signs recorded, only 4 were direct sightings of individuals while just under 60% of indirect signs were campsites, the remainder being dens. Ten of the 25 surveyed sites were selected on the basis of interviews with local people, 80% of which proved to be positive. The remaining 15 sites were chosen using maps and only 1 was positive when surveyed.

After analysing the data collected, this study suggests the following distribution survey guidelines: 1.- One site per 15'x15' quadrant should be surveyed and a minimum of two of the four quadrants should be surveyed in a 30'x30' square. 2.- To reduce costs, a stop-at-first-sign approach should be adopted during surveys, i.e. halting the survey of a site at the first sign (direct or indirect) that without question indicates the presence of giant otters. 3.- The standard site survey distance could be halved to 15 km without affecting the probability of encountering giant otter sign, but this would need to be tested in other habitats and at different otter densities. 4.- Survey sites should be selected as much as possible on the basis of reliable information provided by local people through rapid interviews or questionnaires.

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PERU The distribution and conservation status of the giant otter in the Yavari RZ

The study was carried out in the principle lakes and streams of the Yavari and Yavari – Mirín Rivers which are located within the proposed Yavari Reserved Zone, in the province of Ramón Castilla, department of Loreto, northeastern Peru. Data collection was conducted between the 6th and 30th of November, the beginning of the wet season.

With the objective of ensuring the conservation of species important to science, including the giant otter, it is important to carry out studies in the upper Yavari watershed since the area is considered a source for area for endangered wildlife. In this context, the afore-mentioned study aims to contribute towards existing knowledge of ecology, current status and population dynamics of the giant otter so that its requirements are included in local community wildlife management plans.

Four direct sightings of giant otters were recorded during the field period, two of which were of transient individuals; two family groups were also seen, comprising 6 and 10 animals respectively. In total, 18 individuals were recorded. The majority of sightings were near the Carolina community in Quebrada Amador (4°22'45''S y 71°47'15''W). The giant otters were very nervous in our presence, always alert to danger; when in groups they expressed alarm noisily but the solitary animals simply escaped. This behaviour is due to the fact that the study area is under severe hunting pressure by local people and commercial fishermen who come from outside.

Cubs were not observed, only juveniles, subadults and adults. A total of 17 indirect signs, in use and not in use, were encountered. Also, discussions were held in the Carolina community about giant otter abundance, distribution and habitat use, and posters were distributed as part of an environmental education campaign. This work was made possible thanks to the financial and logistical help of Dr. Richard Bodmer, Dr. Pablo Puertas, the Wildlife Conservation Society (WCS) and the Durrell Institute of Conservation and Ecology (DICE).

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BRAZIL Range-wide initiative to document population status / distribution trends

Between the 10th and 13th of December 2003, a workshop was held at the Centro de Conservação do Pantanal, Fazenda Sete, in the Brazilian Pantanal, to further the development of a range-wide giant otter distribution survey strategy. The event was organised by Sociedade Civil Mimirauá and the IUCN/SSC Otter Specialist Group with support from the Wildlife Conservation Society and Fundação Brasileira para o Desenvolvimento Sustentável. Fourteen otter specialists participated, including Claus Reuther, Chairman of the IUCN/SSC Otter Specialist Group, as well as researchers representing Brazil, Bolivia, Guyana, Suriname and Peru.

A preliminary paper entitled “Towards a Standard Range-wide Distribution Survey Strategy for the Giant Otter (*Pteronura brasiliensis*)” (Groenendijk et al., in prep.) was used as a basis for the refining of a first set of guidelines for the carrying out of giant otter distribution surveys in a standardised format, in order to generate reliable and comparable data. This process also includes the standardising of basic survey methodology, described in the paper “Standard Field Survey Techniques for the Giant Otter (*Pteronura brasiliensis*)” (Groenendijk et al., in prep.) which will be finalized during January/February 2004 with a last round of comments from the contributors. Moreover, data obtained through future standardized giant otter field surveys will contribute to a newly developed and user-friendly Geographic Information System created by Aktion Fischotterschutz, Germany. This database will facilitate the estimation and evaluation of future variations in the distribution and population status of the species, and will lay the foundation for long-term giant otter conservation programmes across national boundaries.

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COLOMBIA Population aspects and habitat use in the Alto Purité River, Amazonia

The Purité River is a tributary of the Putumayo River, one stretch of which is located in Brazilian territory and the other in Colombia, in the extreme south of the latter country. It represents one of the natural eastern limits of the Amacayacu Natural National Park, in one of its least explored sectors. It was in this zone that Professor Thomas Defler established the OMÉ biological station of the Colombia National University, Leticia, capital of the department of Amazonas. During one of his visits to the station, Prof. Defler registered the presence of giant otters; on this basis and due to my interest in the species, we decided to develop a research proposal which will be carried out in the area in 2004. The main objective is to evaluate giant otter population status and habitat use, as well as the existence of possible threats to the environment and the relationship between humans and the species. Furthermore, data will be generated for a little explored area of the Amacayacu NNP and utilisation of the biological station as a regional study base will be promoted.

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VENEZUELA Fishermen: do they pose a threat to giant otter populations?

This question arose during interviews with members of the local communities in my study area, in order to assess their willingness to support a giant otter conservation programme, based on the importance of the species as a symbol of the area. A symbol represented by a statue of a giant otter placed at the entrance of “Puerto Nutrias” (Otter Port), a name given to the locality in honour of the large number of otters that inhabited the area in decades past.

But the main reason for these interviews is to better understand the potential threats to the conservation of the species. This is why I visited the house of one of the many fishermen who live here, who I had been informed had giant otter cubs in his possession.

There were two. The first thing I noticed was that they seemed a little undernourished. I asked him for all the details of how he got hold of them, and, in summary, his story is as follows. He was fishing on the river with his small son. He saw a group of animals acting very defensively and he suspected that surely they had cubs. He decided to stop fishing and to walk along the river bank in search of the den. When he found it, and while he scared off the adults with loud shouts and sticks, he poked a wooden pole in the den to chase out any inhabitant. Two giant otter cubs emerged. He caught them and took them home.

This all happened approximately two weeks before; the cubs would have been about 15 days old then.

He mentioned that this was the second time he had 'hunted' giant otters; the first juvenile he captured also during a fishing trip and he kept it as a pet. But he had other plans for this pair, to sell them. The price he was asking was 250 bolivianos, or 156 US \$. The price was high because apparently he wanted to cover the cost of feeding them well with milk, but also because he was under the impression that they were much desired by tourists and that he could therefore make a profit. Despite his good intentions, both cubs died the following week, possibly due to dehydration brought on by diarrhoea, in turn induced by the consumption of buffalo milk

This experience gave rise to a number of queries: are fishermen, and whole communities that depend on subsistence fishing, being included as important actors within management plans proposed for the conservation of *Pteronura brasiliensis*? Is the giving out of information about the species being well managed amongst members of the rural communities? And lastly, are those responsible for ensuring that wildlife laws are observed, doing so efficiently?

These doubts will form the basis for my next research study, during which, as well as develop an integral conservation plan for the species, I will attempt to revive amongst the local people the idea of the giant otter as a symbol of their identity, and by this means encourage the relevant authorities to build a new head for the giant otter statue, which was decapitated some time ago.

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SPECIALS

International Studbook for the Giant Otter finally approved

Finally, the WAZA/CIRCC and the IUCN/SSC have endorsed the establishment of an International Studbook for the giant otter (*Pteronura brasiliensis*) which will be jointly managed by Dortmund Zoo (Germany, Director Dr. Frank Brandstätter) and Brasilia Zoo (Brazil, Director Raul Gonzalez Acosta). The setting up of an International Studbook (ISB) became urgent to ease the future management of the captive giant otter population. Since more than ten years, and despite considerable efforts on the part of many zoos, only those in Brasilia and Cali (Colombia) have been successful in breeding the species. Through the extensive work of Elke Staib and Christof Schenck with giant otters in the field we also know about the dangers this animal is facing in the wild.

It was decided to hold the ISB jointly since only sustained communication between otter-keeping institutions and the responsible government officials in the giant otter's native countries can help in saving this important species for future generations. With the help of the ISB we are hoping to promote an exchange of knowledge on all subjects related to giant otter biology and reproduction and to set up healthy populations to breed the species in captivity. The appointed studbook Coordinators are Sheila Sykes-Gatz for Dortmund Zoo and Marcello Lima Reis for Brasilia Zoo. In addition to the approval of the studbook, the EEP Council has also approved a European Endangered Species Breeding Programme (EEP) for the giant otter (in Europe this is the highest ranking level of any breeding programme). The EEP is held by Dortmund Zoo and Dr. Frank Brandstätter has been appointed as the coordinator.

The first edition of the studbook will soon be developed and will be accompanied by the publication of an updated version of the husbandry guidelines compiled by Sheila Sykes-Gatz (see FoGO issue No.3).

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Giant otters in DortmundZoo

REGULARS

Observations from the field

Tail-waving and scent marking: the ontogeny of a behaviour pattern

During scent-marking and scat-spreading on campsites in the wild, giant otters wave their tails vertically and horizontally while defecating and urinating. The scent gland in the anus may be protruded and scent sprayed and/or deposited. Pure scent is a yellowish mucilaginous substance which has a strong musky smell but does not have a 'fishy' smell like an otter scat. Tail waving may occur also when the otters are kneading/mixing the scats into the substrate with circular movements of their forepaws (Duplaix, 1980).

Also, tail-waving is used as an intimidation behaviour when an otter is "protecting" its fish from another otter that may attempt to steal it. The animal keeps its waving tail turned toward the approaching otter. The hind legs may be stiffened so the hindquarters are raised, hind feet stamping alternately. The tail-waver may give an intimidating long, wavering call but not a growl. Intimidation tail-waving may also be used during play between juveniles to protect a play object.

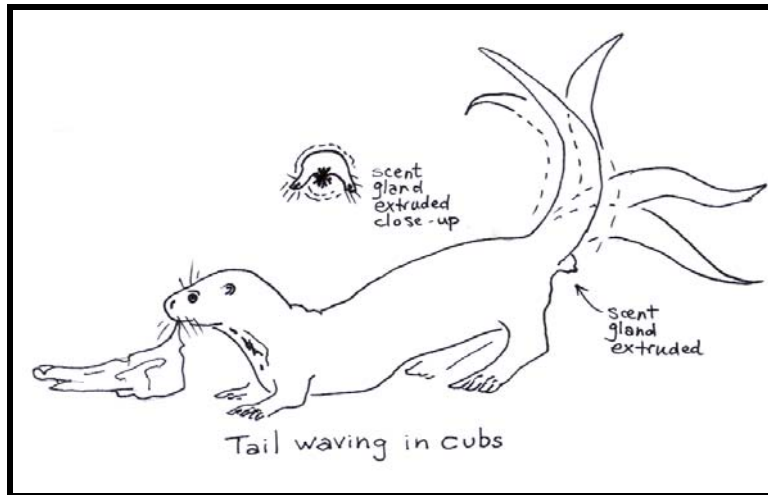
During hand-rearing of orphaned cubs, tail-waving was seen in cubs as young as 2 weeks old (D. McTurk, pers. comm.). Tail-waving in captive cubs may occur:

- 1) while cubs suckle milk from a bottle. The scent gland is protruded but there is no odour noticeable until the cub is 3 months old.
- 2) after suckling, when the cub is settling down to sleep, or when waking up briefly. The cub will start whining or squeaking loudly and begin rapid tail waving. The scent gland is protruded from the anus – both gland openings are visible. In cubs older than 11 weeks the hind paws may be spread, the hindquarters may be raised and the hind paws may or may not be stamped alternately as in adults. During tail waving, the cub noses into covers and suckles on a corner of a thin cloth until it falls asleep again. Again, the tail waving cub will turn its back to another cub as if "protecting" its nipple or sucking towel.

Discussion: Clearly tail waving in small giant otter cubs and juveniles does not have the same function as during scent spreading in adults, yet the posture is essentially the same. Both captive and wild juveniles and subadults use this posture during play to "protect" toys or fish, thereby discouraging approach by siblings, and the scent gland is protruded. The intimidation vocalizations are similar in young cubs and subadults. This posture has also been described in play sequences of other captive otter species, *Lontra canadensis* and *Lutra (Lutrogale) perspicillata* (Duplaix, 1982). Adult giant otters do not share the fish they catch (except with cubs) and actively protect it from others attempting to steal it (Duplaix, 1980).

The ontogeny of this intimidation behaviour pattern in giant otters may begin with nipple choice in young otter cubs. Nipple 'ownership' was first described in domestic kittens (but does not include tail waving) who suckle consistently from the same nipple and shoulder aside other kittens to reach it. This early form of intimidation behaviour between otter cubs protecting their nipple may then evolve into protecting prey (fish) in juveniles and as adults, in marking (advertising) their campsites. In all forms, these intimidation behaviour patterns are used to prevent aggressive encounters and injury. Giant otter cubs, and other carnivores such as puppies and kittens, have very sharp claws from birth that could inflict serious

scratches to litter mates. The prevention of injuries may then be the selective pressure responsible for perfecting nipple ownership – as noted by Ewer (1959, 1968).



Cub sucking cloth

Duplaix, N. (1980). Observations on the Ecology and Behavior of the Giant River Otter (*Pteronura brasiliensis*) in Suriname. *Rev. Ecol. (Terre Vie)*, vol. 34 (1980); pp. 496-620

Duplaix, N. (1982) Contribution à l'Ecologie et à l'Ethologie de *Pteronura brasiliensis* (Carnivora, Lutrinae): Implications Evolutives. Doctorat Thesis, Univ. of Paris-Sud, 352 pp.

Ewer, R.F. (1959) Suckling behaviour in kittens. *Behaviour*, 15, 146-162.

Ewer, R.F. (1968). *Ethology of Mammals*. London: Logos Press Ltd. 418 pp.

The Latest Publications

Although not directly related to giant otters, the following two recent publications, in *Oryx - The International Journal of Conservation*, Vol. 37, No. 4, October 2003, will be of importance to any otter specialist interested in species distribution and habitat use:

Environmental correlates of the distribution of southern river otters *Lontra Provocax* at different ecological scales (pp. 413 - 421), *M. B. Aued, C. Chéhebar, G. Porro, D. W. Macdonald, M. H. Cassini*

The influence of riparian vegetation, woody debris, stream morphology and human activity on the use of rivers by southern river otters *Lontra Provocax* in Chile (pp. 422 - 430), *Gonzalo Medina-Vogel, Vera S. Kaufman, RenÉ Monsalve, Vicente Gomez*

Forthcoming Events

11th Workshop of Aquatic Mammal Specialists of South America and 5th Congress of the Latin American Society of Aquatic Mammal Specialists (SOLAMAC), September 2004.

Location: Cultural Centre of the Pontificia Católica University, Quito Ecuador

Dates: Second week of September, 2004

Organisation: School of Biological Sciences of the Pontificia Católica University of Ecuador

(PUCE), Latin American Society of Aquatic Mammal Specialists (SOLAMAC).

Participant registration and the receiving of abstracts will be between the 1st of February and the 30th of April, 2004.

Registration costs

Date	Undergrads	Postgrads Professionals
Up to 30 th April, 2004	50,00 USD	80,00 USD
After 30 th April up to 16 th August, 2004	60,00 USD	90,00 USD
During the event	70,00 USD	100,00 USD

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IXth International Otter Colloquium, June 2004

The IXth International Otter Colloquium, accompanied by a meeting of the world-wide IUCN/SSC Otter Specialist Group, will be hosted on the campus of Frostburg State University, Maryland, USA, on 4-10 June 2004. Head of the organising committee is Thomas L. Serfass (Department of Biology, Frostburg State University, Frostburg, MD 21532, e-mail: tserfass@mail.frostburg.edu). The meeting is expected to be attended by participants from at least 40 countries. More information is available at the website <http://otter.frostburg.edu>

Pepe's Paragraph

First of all, I wish you all a fantastic year, with lots of fish, a safe territory, healthy cubs and no interfering neighbours!! Now, my ex-mate, Doble (the cute but nervous one, remember?) has asked me if she can tell you about her recent experiences. She's had a tough time, these are her words: "Well, after I left Pepe (living on the river was not for me), I met a male called Gancho on an oxbow lake, and together we had a litter of two cubs. Sadly, one died within a few months. Then something even more awful happened; Gancho and our remaining cub disappeared. It's really difficult for us otters to find a mate, then to hold on to him (or her). But it's even more difficult, if it's just a pair of us, to defend a territory and to raise our first litter of cubs, because we have no previous litter to help us!! So, four years after first becoming solitary, I find myself all alone again. But perhaps 2004 will be my year. Wish me luck!!!"



Pepe & Doble

Written contributions are gratefully received. Please send them to: Friends of the Giant Otter, Calle 5, No. 131, Dpto. 202, Urb. Los Jasmines, Santiago de Surco, Lima or to fzsgop@terra.com.pe. If you wish your name to be removed from the mailing list, or if your address changes, please notify Jessica Groenendijk. The opinions expressed in this newsletter are not necessarily shared by the Frankfurt Zoological Society Giant Otter Project (www.giantotters.com).

