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# GIANT OTTER PROJECT IN PERU FIELD TRIP AND ACTIVITY REPORT - 1998

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Abstract: The Giant Otter (Pteronura brasiliensis) is the largest of the 13 species of otters. Living in the rainforests of South America, it has since 1973 been considered the most threatened in the world by by the IUCN Otter Specialist Group. The species is considered "vulnerable" by the IUCN and has been on CITES Appendix I since 1973. At the First Symposium for the Conservation of the Giant Otter organized by INRENA (National Institure of Natural Resources) in Lima, it was decided that field work should be undertaken to survey the area round Port Maldonado in south-eastern Peru; and the implementation of environmental education and public awareness was continued. The objective of the field work was to evaluate three areas of great survival importance for the of Giant Otters Peru: in i) Lake Sandoval, about 14 km from Port Maldonado, is the easiest place in Peru to observe Giant Otters and they have been studied there between 1990 and 1992. It is also a perfect tourist destination, but badly organised tourism has led to the animals becoming very timid. As requested by INRENA, we produced an outline for more effective management of Lake Sandoval: creation of areas where human activity is restricted; construction of observation towers platforms; restriction on how closely the boats can approach the otters; obliging tourists to be accompanied by an official guide; production of posters and pamphlets on the biology of the species and explaining the necessity for following rules; restrictions on the number of boats at any time on the lake, noswimming zones; no entry zones; no fishing zones; a system of fines for transgressing these rules, and an entry fee to pay for infrastructure improvements. Current activities could continue but in a more controlled form. Evaluation of the success of the scheme will be based on the behaviour and reproductive success of the otters. The survival of Giant Otters in Lake Sandoval implies the existence of a corridor between nearby populations. ii) Lake Valencia, 24 km from Lake Sandoval, on the other side of the Madre de Dios River, and is subject to more human disturbance; otters had not been reported for 10 years, but recently a family group was filmed there, and we were able to confirm their presence when we visited. This has important implications linking isolated Peruvian for populations. iii) Rio Palma Real is in the protected zone in its middle and upper reaches; to the east runs the Heath river, and to the West, the 'Quebrada' Briolo, and Giant Otters were confirmed in both these rivers in 1992. During our field work, we found Giant Otters in the Rio Palma Real, which could bridge between the two nearby populations. Both Giant Otters and Neotropical Otters (Lontra longicaudis) were found in the Palma Real Field activities also included the training of a group of technicians and biologists in methods of investigation of Giant Otters. During the Lima Symposium, 1000 posters of Giant Otters with a conservation message, 500 technical posters, 500 pamphlets on the Giant Otters, and 80 educational slide distributed. packs were In an area in the environs of the National Reserve Pacaya-Samiria, in the North of Peru, 1500 copies of a Giant Otter colouring book, "Pepe, the Giant Otter" for children were distributed, and a drawing competition was organized to stimulate the involvement of children and their understanding and appreciation of its environment.

## INTRODUCTION

The Giant Otter (*Pteronura brasiliensis*) is the largest of the world's 13 otter species and is endemic to the rainforests and wetlands of South America. The IUCN Otter Specialist Group has considered the Giant Otter to be the most endangered otter species in the world since 1978. The species is currently classified as 'vulnerable' by IUCN (1996) and has been listed since 1973 under Appendix I (species threatened with extinction) of CITES. Comparatively little is yet known of Giant Otter biology and ecology, whether in captivity or in the wild.

In 1990, the project "Status, habitat, behaviour and conservation of Giant Otters in Peru" was initiated by the Frankfurt Zoological Society - Help for Threatened Wildlife (FZS). The key objective of this project is to increase knowledge and understanding of these unique animals and to develop a comprehensive plan for their conservation in Peru. The development and progress of the project has been described continuously in this newsletter (SCHENCK and STAIB, 1992, 1994, 1995, 1996; SCHENCK et al., 1997).

In 1998, the first International Symposium for the Conservation of the Giant Otter was held in Lima; a field trip was conducted in order to evaluate former and new study areas in the surroundings of Puerto Maldonado in south-eastern Peru; and the implementation of environmental education and public awareness was continued. In the following, we give a short description of these major activities:

# FIRST INTERNATIONAL SYMPOSIUM FOR THE CONSERVATION OF THE GIANT OTTER

On the 10<sup>th</sup> and 11<sup>th</sup> of September, the 1<sup>st</sup> International Symposium for the Conservation of the Giant Otter was held in the National Institute for Natural Resources (INRENA), Lima. The symposium was organised in response to the growing necessity to catalyse new studies and protection measures for this species and its Amazonian habitat, and was attended by more than 100 representatives of scientific institutions, conservation groups, tourist companies, oil companies, universities, museums, protected area administrations, and the Peruvian government.

In accordance with the interdisciplinary nature of the symposium, presentation topics ranged widely; from the role of Giant Otters within the sustainable development of rainforest areas, to recent Giant Otter survey work in the Candamo river region, to the use of computer modelling of Giant Otter populations for the improvement of protected area management.

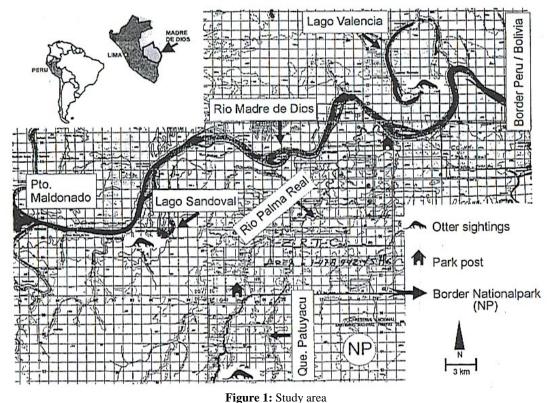
The presentations were followed by four workshops in which all participated. The four themes were (1) contributions to the Peruvian Otter Action Plan 2000, (2) investigation priorities for the Giant Otter in Peru, (3) conservation priorities for the Giant Otter in Peru, and (4) project organisation and fundraising.

The symposium report is currently being completed and will be published in Spanish by INRENA in early 1999.

## FIELD WORK IN SOUTH-EASTERN PERU

The goal of this field work period was to evaluate three different areas, all of outstanding importance for giant otter survival in SE Peru (Fig. 1): a. Lago Sandoval, an oxbow lake of the Madre de Dios river, located only approximately 14 km from the city of Puerto Maldonado. Studies on Giant Otters have taken place there between 1990 and 1992 (SCHENCK, 1996); b. Lago Valencia, an oxbow lake also situated along the Madre de Dios River. There have been no Giant Otter reports for over 10 years; recent sightings, however, suggest a recolonisation of this, the largest lake in SE Peru; c. Rio Palma Real, a small river flowing northerly before meeting the Madre de Dios. Reports have suggested the presence of a Giant Otter population, which could be an important link between known populations of the Tambopata and Heath rivers. Training in Giant Otter research methods (track, spraint and den identification, key differences between *Pteronura brasiliensis* and *Lutra longicaudis*, throat pattern filming etc.) for three biologists and technicians also formed part of the field trip.

The field-work took place from 16.09.98 to 2.10.98. The team consisted of Christof Schenck (Frankfurt Zoological Society), Lucia Luna Wong (Conservation International), Jessica Groenendijk and Frank Hajek (independent), Cesar Vasquez (boatdriver), Joel Huaman (local assistant) and Dario Cruz (gamewarden).



## Lake Sandoval

Lake Sandoval, compared to other oxbow lakes in SE Peru, is one of the largest with a water surface area of approximately 125 ha and is located only one hour by boat from Puerto Maldonado, the capital of Madre de Dios. The presence of a species of palm tree (*Mauritia flexuosa*) in pure swamp stands or 'aguajales' lends the landscape an extraordinary scenery. This, together with its rich biodiversity and the presence of Giant Otters, makes the lake a perfect tourist destination. In contrast to most neotropical mammals, Giant Otters live in groups, are active by day and are relatively easily detected in the open water. The Giant Otter is a rare and endangered animal and therefore represents a key species for tourism in SE Peru.

At the time of our visit we observed only one solitary otter on one occasion. An old den on the shore and a number of large campsites (marking places) were found. The group of 11 individuals, which formerly inhabited the lake had not been observed by the locals for several months. We later heard that, from October onwards, a large group of otters was once again present at Lake Sandoval.

The tourism potential of Lake Sandoval has long been recognised and exploited. Research carried out between 1990 and 1992 showed that disturbance of otters was commonplace and resulted in shy animals. Main problems have been:

- More than 400 students may visit the lake at any one time, and are allowed free reign, swimming in the lake, scattering garbage and playing loud music.
- Local 'guides', inadequately trained and inexperienced, bring groups of tourists independently to the lake and camp on its shores, often with complete disregard of the presence of Giant Otters. On several occasions, they have set up their camp, log fire and music system in the immediate vicinity of a Giant Otter den.
- Illegal fishing is practised.

• Local landowners are clearing plots and paths, and one family has been running a lodge for many years, attracting low budget tourists as well as the afore-mentioned school field trips from Puerto Maldonado.

The 1998 evaluation showed that all these problems remain while new activities have been developed (Fig. 2):

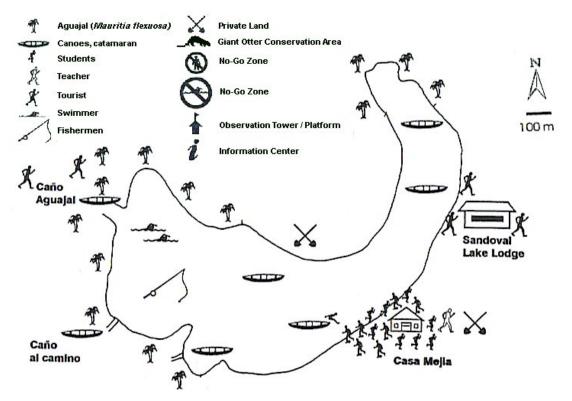


Figure 2 . Activities on Lake Sandoval that threaten Giant Otters

- A new lodge has been constructed on one of the lake shores without official permission.
- An increased and unregulated number of tourist and lodge boats/catamarans depart during the day (up to six canoes have been observed on the lake at any one time).
- Another tourist organisation is reportedly attempting to build a lodge on the opposite bank, having already constructed a walkway through the palm swamp forest for which more than 100 palm trees were cut down.
- Conflicts have arisen between the tourist companies and little effort is made to communicate or reach a compromise.

As requested by INRENA, we produced an outline for a more effective management of Lake Sandoval (Fig. 3).

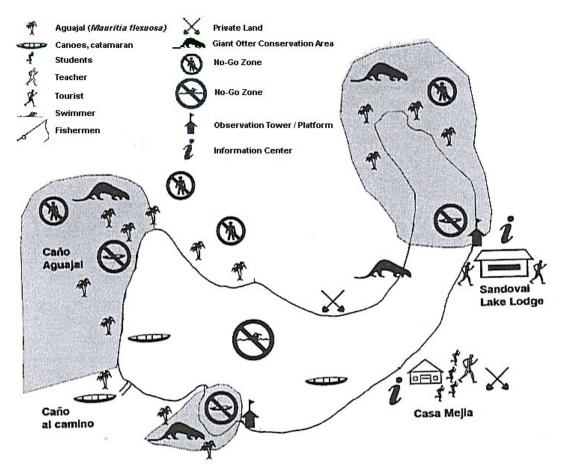


Figure 3 . Proposed solutions for Lake Sandoval to keep Giant Otters safe

The plan recommends that the following measures be introduced:

- No activity of any kind should be permitted within the 'agaujales', which also provide important nesting sites for many species of birds as well as a refuge for fish fry. No new paths should be cleared close to the shore line.
- No-go zones must be established in key areas, which are favoured by Giant Otters and where they have been observed most frequently. By sectioning off these zones, the otters are offered a degree of seclusion and a possibility to 'escape' the attentions of tourists.
- Observation towers and/or platforms should be constructed at strategic locations which permit the viewing of Giant Otters even within the otherwise 'no-go' zones. Stationary observation points are considerably less disturbing than moving canoes.
- If and when Giant Otters do venture outside the restriction zones, tourists and lodge boats must not be allowed to approach too close. A distance of at least 50 metres should be maintained between the otter(s) and the canoe.
- Tourists must be accompanied always by a trained and/or licensed guide.
- Lodges should provide posters / leaflets / lectures / slide shows, and the observation towers / platforms should also be equipped with informative and appropriately protected boards which illustrate the lifestyle of the Giant Otter in layman terms as well as explain the need to adhere to specific rules.
- A maximum of three boats should be allowed on the lake at any one time in order to minimise disturbance.
- Swimming should only be allowed directly in front of the existing lodges.
- The number of students which visit the lake should be limited to 40 individuals accompanied by at least two teachers / adults. School trips should be planned in advance and both the lodges as well as INRENA should be notified beforehand.
- All types of fishing should remain prohibited.

- If necessary, a suitable system of fines could be designed to ensure that rules are respected in the future.
- An entrance fee could be charged to cover infrastructure improvements.

The proposed management plan allows all human activities that have been conducted thus far to continue, albeit in a more controlled form and with the exception of fishing. The management strategy should be implemented by means of a positive approach. Rather than forbid activities, people should be offered better possibilities (of improved wildlife observation for tourists or, in the case of guides, an adequate income, which reflects higher tour standards). The effectiveness of the management plan should be evaluated according to Giant Otter behaviour and reproductive success. The survival of Giant Otters at Lake Sandoval not only means that there is an important stepping stone between neighbouring populations but also that the easiest-to-reach location for Giant Otter observation in Peru remains unspoilt.

## Lake Valencia

Lake Valencia is located a distance of roughly 24 km (as the crow flies) downriver from Lake Sandoval, on the opposite bank of the Madre de Dios River (Fig. 1). For at least ten years there have been no positive reports of Giant Otters inhabiting Lake Valencia. This information may be considered relatively reliable as several families live on the shores of Lago Valencia and the area is visited regularly by tourist groups.

Lake Valencia appears to suffer from human disturbance to a greater extent than Lake Sandoval. While the latter is visited only by canoes, motor boats access Lago Valencia via a fast-flowing stream or 'quebrada', connecting the lake with the Madre de Dios river. Fishermen have settled on the lake's shores, which have been partially deforested. Although there are no lodges as yet, tourism does occur on a small scale. Fishing is a principle activity, with nets, which are staked out over a stretch of water for a period of time.

Mid 1998, there were rumours that Giant Otters once again inhabited Lago Valencia. In July, a British film crew working on a documentary on Giant Otters found two adults and three cubs. When visiting the lake in September we were able to confirm this observation. The footage obtained by the film crew will be used to document the distinctive white throat markings of these individuals, which can be referenced in any future studies. The recolonisation of Lago Valencia is an important contributory factor towards the linking of isolated otter populations in SE Peru. In view of the intensive human influence, specially designed education and monitoring programmes are essential for Lago Valencia.

## The Palma Real River

The Palma Real River flows in a northerly direction before eventually meeting the Madre de Dios river. Its upper reaches are located entirely within the recently created Bahuaja-Sonene National Park (BSNP), the middle section forms a border between the BSNP and the Tambopata-Candamo Reserved Zone (TCRZ), and the lower stretch, up to its confluence with the Madre de Dios, does not enjoy any form of protected status whatsoever (Fig. 1). To the east of the Palma Real lies the Heath river system, which forms the border between Peru and Bolivia; to the west lies the smaller river or 'Quebrada' Briolo. The presence of Giant Otters in the Heath River system was confirmed by the FZS project in 1992 and has also been reported for the Briolo river. The objective of this field trip was to ascertain whether the Palma Real was also inhabited by Giant Otters, in which case it may function as a link between the Heath and Briolo River systems and therefore as a corridor between the Tambopata / Sandoval Giant Otter population and that of the Heath watershed.

At the entrance of the Palma Real River, a new park post has been constructed with the aid of brazil nut collectors or 'castañeros'. The gamewardens had received limited petrol supplies during 1998 to patrol the Palma Real and our field trip represented the first opportunity to do so in roughly six months.

The Palma Real is a small, meandering river of an estimated width varying between 10 and 20 metres and a depth regularly exceeding 2 metres. The river has few oxbow lakes or 'cochas' and those, which are present are very small (less than 100 m in length and 20 m in width). The remains of at least six Brazil nut collection camps were noted, and it was considered possible that the castañeros were perhaps partly responsible for the scarcity of game such as howler and spider monkeys.

Roughly six hours from the mouth of the river (with a 10m canoe and a 17 hp peke-peke engine) is a second park post, Puesto Enahuipa, which had not been occupied for at least six months. Constructed with confiscated wood, Puesto Enahuipa was initially built with the purpose of controlling entrance to the Pampas del Heath National Sanctuary, which currently forms part of BSNP. Now that a new gamewarden post guards the entrance to the Palma Real River, Puesto Enahuipa has become superfluous and has therefore received little maintenance. Despite the neglect, it is still in good condition and is well equipped. Inrena is now looking for partners to give Puesto Enahuipa a new purpose as a biological research station.

Two hours by boat up-river from Puesto Enahuipa, old tracks and resting areas of Giant Otters were found, as well as fresh tracks of a Neotropical otter (*Lontra longicaudis*). A large, relatively new otter campsite with a strong smell and numerous scales, fish bones and insect activity was encountered further upriver, and later we found a number of dens. A little further upriver from the den area we were confronted by at least five adult Giant Otters. They came directly towards us, making their snorting warning call. Then the group retreated slightly and began shouting agitatedly at each other. A contact call from downriver gave the impression of an additional otter, but only five animals were observed at any one time. There did not appear to be any cubs.

At the end of the second day of travelling up-river from Puesto Enahuipa, it was not possible to continue due to the falling water level of the river and the large tree trunks, which obstructed it. The Quebrada Patuyacu, a tributary of the Palma Real, was also navigated from Puesto Enahuipa down-river using an inflatable boat. Later, a Neotropical Otter was observed in the Rio Palma Real, down-river from Puesto Enahuipa. The observations confirm the presence of both otter species in the same river system.

In 1998, there were only 8 game-wardens actually on location in BSNP, compared to 19 in the previous year. There are few resources to ensure that park posts are fully staffed throughout the year and game-wardens are very poorly paid. Bahuaja-Sonene National Park has been recently created and has thus far received little attention and publicity, compared to Manu National Park for instance, which has been established for over 25 years and which is now widely recognised. The latter is in part due to the fact that the Manu Cocha Cashu research station has facilitated the production of numerous, well respected papers which have been published internationally. Between 6000 and 7000 tourists currently visit BSNP annually but concentrate mainly in Tambopata and Lago Sandoval.

The Palma Real observations of the Giant Otter group gave rise to several important questions: Given the conditions of the Palma Real river and the presence of a relatively large Giant Otter family unit, what minimum stretch of river does such a group claim as its territory? Are there more groups on the Palma Real? Does a resident family unit migrate up- or down-river periodically, relocating den sites in order to make maximum use of fish resources? If so, what is the relationship between fish density and migration, and the movement of Giant Otters? Does otter migration take place between river systems, so that the Palma Real becomes a corridor, connecting Giant Otter populations in the Heath area and those of the Tambopata region? What happens during the wet season when the river water level rises by several metres, turbidity increases, and fish are presumably much harder to catch? And finally, to what extent do the presence and activities of 'castañeros', game-wardens, scientists and tourists influence the presence of Giant Otters and the locations of their den sites on small rivers such as the Palma Real? While investigation on larger rivers and the importance of oxbow lakes for Giant Otters was a focus of former research (SCHENCK, 1996), it is planned to concentrate future research on small streams and quebradas.

From March 1999 onwards, Jessica Groenendijk and Frank Hajek will represent the Frankfurt Zoological Society in Peru, as coordinators of the FZS Giant Otter Conservation Project. The main objectives are to (1) further Giant Otter conservation in Peru, through capacitating, education, promotion and networking initiatives; (2) assist government institutions with habitat and Giant Otter management; (3) carry out scientific research in order to complement existing results; (4) catalyse and contribute towards the development of a national distribution map for the species.

#### Public awareness activities

In the area surrounding Pacaya-Samiria National Reserve in northern Peru, 1500 copies of the drawing book for Peruvian children, "Pepe, el Lobo de Rio" (Pepe, the Giant Otter), funded by GTZ/TÖB Germany, were distributed. Together with the Peruvian NGO, Pro Naturaleza, a drawing competition was organised in order to further stimulate the involvement of children and hence their understanding and appreciation of their natural surroundings. This competition was very well received as indicated by a high response rate (876 participants). Pro Naturaleza and National Reserve authorities have requested the continuation of this project.

At the Giant Otter Symposium in Lima, the following educational and promotional materials were distributed: 1000 Giant Otter posters with a conservation message (designed and produced by the Frankfurt Zoological Society), 500 Giant Otter technical posters (designed and produced by INRENA), 500 booklets "Lobo del Rio - un gigante bajo pressión gigantesca" (designed and produced by Frankfurt Zoological Society) and 80 educational slide packs for use in tourist lodges, schools and gamewarden posts.

A photographic exhibition illustrating the habitat of and current threats to the Giant Otter was held at the symposium. This material was donated to INRENA. A proposal was made to establish a 'Friends of the Giant Otter' communication network and newsletter in Peru; this will be one of the key activities of the project in 1999.

Acknowlegdements - The project is financed by the Frankfurt Zoological Society, Help for threatened Wildlife. We like to thank the Peruvian authorities INRENA for all support and the administration of the National Parks for the possibility to realise the field work. Special thanks also to ProNaturaleza and LUFTHANSA for cooperation and support.

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#### **RESUMEN : Reporte de actividades y salida de campo del Proyecto Nutria Gigante en Perú -**1998

La nutria gigante (*pteronura brasiliensis*) es la mayor de las 13 especies de nutrias. Es endémica de selvas y humedales de américa del sur. Ha sido considerado por el grupo de especialistas en nutrias de la uicn como la nutria más amenazada en el mundo desde 1978. La especie es considerada "vulnerable" por la uicn y aparece en el apéndice i de cites desde 1973. En 1998 se realizó en el inrena (instituto nacional de recursos naturales), en lima, el 1er. Simposio para la conservación de la nutria gigante, se realizó una salida de campo para evaluar áreas en los alrededores de puerto maldonado en el se de perú, y se continuó con actividades de educación ambiental y conciencia publica. El objetivo de las tareas de campo fue evaluar tres áreas de gran importancia para la supervivencia de las nutrias

gigantes en el se de perú: i) lago sandoval, a unos 14 km de la ciudad de puerto maldonado. Se han realizado estudios sobre nutrias gigantes allí entre 1990 y 1992; ii) lago valencia, no han habido reportes allí de estas nutrias en los últimos 10 años. Avistajes recientes sugieren la recolonización de este, el lago mas grande del se de perú; iii) río palma real, reportes sugieren la presencia de una población de nutrias que pueden representar un lazo importante entre poblaciones conocidas de los ríos tambopata y heath. El entrenamiento de un grupo de técnicos y biólogos en métodos de investigación de nutrias gigantes, también formó parte de las actividades de campo. El lago sandoval es un destino turístico perfecto. Durante nuestra visita observamos una sola nutria gigante, a partir de octubre un grupo grande de nutrias volvió a aparecer en este lago. La mala explotación turística del lugar, estudiada entre 1990 y 1992, perturba a las nutrias, provocando que estos animales sean tímidos ante el hombre. En 1998 la situación se había agravado. A pedido del inrena se realizaron las siguientes recomendaciones para un manejo más efectivo del área: delimitación de áreas restringidas a las actividades humanas, construcción de torres y plataformas de observación, restricción de la distancia a la que los botes pueden acercarse a las nutrias, obligación de los turistas de ir acompañados por un guía, producción de posters, folletos, etc. Y de carteles para los puntos de observación, sobre la biología de la especie y explicando la necesidad de seguir reglas, restricciones al número de botes presentes en el lago, las zonas de nado y el número de visitantes, prohibición de realizar pesca, diseño de un sistema de multas si fuera necesario, y cobro de una cuota de ingreso para mejoras si se desea. El plan permite continuar con las actividades realizadas hasta el momento, pero de forma más controlada. El éxito del mismo debe evaluarse en función del comportamiento y el éxito reproductivo de las nutrias. La supervivencia de estas en el lago sandoval implica que existe una piedra de paso entre poblaciones cercanas y que la localidad de mas fácil acceso en todo perú para la observación de nutrias gigantes sigue estando en buenas condiciones. El lago valencia esta localizado a 24 km en línea recta del lago sandoval en el otro margen del río madre de dios. Parece sufrir mayores disturbios humanos que este último. A mediados de 1998 hubieron rumores de la presencia de nutrias gigantes en la zona tras 10 años sin registros. En julio un grupo de dos adultos y tres crías fue filmado en el lago valencia. Cuando visitamos el área, pudimos confirmar estas observaciones. La recolonización de este lago es un importante factor para la unión de poblaciones aisladas del se de perú.. El río palma real está incluido en su tramo superior y medio en áreas protegidas de la zona. Al este de este río corre el río heath, y al oeste la quebrada briolo. La presencia de nutrias gigantes en ambos cursos fue confirmada en 1992. Durante nuestra salida de campo el objetivo en esta zona fue averiguar si existen nutrias gigantes en el río palma real, en cuyo caso, este podría actuar como vinculo entre los otros dos ríos mencionados, y por lo tanto como corredor para las poblaciones de tambopata/sandoval y heath. Tanto nutrias gigantes como lobitos de río (lontra longicaudis) fueron registrados, durante nuestra campaña, en el río palma real. Durante el simposio, en lima, 1000 posters de nutrias gigantes con un mensaje conservacionista, 500 posters técnicos, 500 librillos sobre el estado de las nutrias gigantes, y 80 juegos de slides para actividades de educación fueron distribuidos. En un área en los alrededores de la reserva nacional pacaya-samiria, en el norte de perú, se repartieron 1500 copias de un libro de dibujos para niños sobre nutras gigantes, y se organizó una competencia de dibujo para estimular el involucramiento de los niños y su entendimiento y apreciación de su entorno natural.