- Hollamby, S., Afema-Azikuru, J., Sikarskie, J. G., Kaneene, J. B., Bowerman, W. W., Fitzgerald, S. D., Cameron, K., Rae Gandolf, A., Hui, G. N., Dranzoa, C. & Rumbeiha, W. K. 2004. Mercury and persistent organic pollutant concentrations in African fish eagles, marabou storks, and Nile tilapia in Uganda, *Journal of Wildlife Diseases*, 40: 261-278.
- **Horne, A. J. & Goldman, C. R. 1994.** *Limnology.* 2nd Edition. McGraw-Hill, New York.
- Jayaweera, M., Dilhani, J., Kularatnei, R. & Wijeyekoon, S. 2007. Biogas production from water hyacinth (*Eichhornia crassipes* (Mart.) Solms) grown under different nitrogen concentrations. *Journal of Environmental Science and Health*, 42: 925–932.
- **Layla Resources. 1999.** *Contaminated land.* <www. ContaminatedLAND.co.uk/caus-con/caus-001.htm>.
- **Malzy, P. 1967.** La héronnière d'Alarobia (Tananarive). *Oiseau et Revue française d'Ornithologie*, 37: 122-142.

- Mayes, W., Batty, L., Younger, P, Jarvis, A., Kõiv, Vohla, M. & Mander, U. 2008. Wetland treatment at extremes of pH: A review. Science of the Total Environment, 10: 1-16.
- **TemaNord. 2002.** *Mercury: a global pollutant requiring global initiatives.* Nordic Council of Ministers, Copenhagen. http://www.norden.org/pub/ebook/2002-516.pdf.
- USEPA. 2008. Ecological Toxicity Information Region 5 Superfund. http://www.epa.gov/region5superfund/ecology/html/toxprofiles.htm.
- van Gestel, C. 2008. Physico-chemical and biological parameters determine metal bioavailability in soils. *Science of the Total Environment*, 406: 385-395.
- Wilmé, L. & Jacquet, C. 2002. Census of waterbirds and herons nesting at Tsarasaotra (Alarobia), Antananarivo, during the second semester of 2001. Working Group on Birds in the Madagascar Region Newsletter, 10: 14-21.

New distributional records of Appert's Tetraka (*Xanthomixis apperti*) from Salary Bay, Mikea Forest, Madagascar

Olivier Langrand¹ & Matthias von Bechtolsheim²

¹Conservation International, 2011 Crystal Drive Suite 500, Arlington, VA 22202, USA

E-mail: o.langrand@conservation.org

²Schlossweg 1, D-97337 Mainsondheim, Germany

Email: U_M.bechtolsheim@t-online.de

Résumé

Le 19 octobre 2008 deux Tétraka d'Appert (Xanthomixis apperti) ont été observés à deux reprises à Baie de Salary, localité située à mi-chemin entre Toliara et Morombe, le long de la côte, dans un milieu appartenant au bush épineux sub-aride. Cette observation constitue une extension significative de la distribution de cette espèce endémique préalablement connue que de la forêt sèche caducifoliée de Zombitse-Vohibasia appartenant au domaine biogéographique de l'Ouest et de la forêt d'Analavelona, forêt humide de l'ouest.

Introduction

On 19 October 2008, we were bird watching 4 km north of the Hotel Salary Bay (coordinates of the hotel: 22°33'19"S, 43°17'08"E) located along the southwestern coast of Madagascar about half

way between Toliara and Morombe. The dominant habitat at the site is south-western dry spiny forest thicket dominated by Didiereaceae and arborescent vegetation such as *Euphorbia enterophora* (Euphorbiaceae) (Moat & Smith, 2007) growing on sandy soil. The weather conditions were excellent, with a slight breeze, very good light, and still cool (18°C at 6:30 am). This region of Madagascar receives little rainfall, around 450 mm per year (Donque, 1972), mostly between December and February.

On the morning of observation we were in the forest between 5:30 am and 8:30 am, very few birds were heard singing, and even fewer moving around despite the fact that mid-October is considered the beginning of the breeding season in this region. We observed several Lafresnaye's Vanga (Xenopirostris xenopirostris), Sicklebill Vanga (Falculea palliata), Archbold's Newtonia (Newtonia archboldi), Subdesert Brush Warbler (Nesillas lantzii), Green-capped Coua (Coua olivaceiceps), Running Coua (C. cursor), and Sub-desert Mesite (Monias benschi). At 8:30 am, when we were about to leave the forest, a small mixspecies flock was encountered, which was the first such flock that morning. As we were observing the different members of the congregation, which included two Archbold's Newtonia, two Souimanga Sunbirds (Nectarinia souimanga), two Sakalava Weavers (Ploceus sakalava), and two Lafresnaye's Vangas, a pair of medium size birds were encountered, similar to a tetraka (Bernieria or Xanthomixis), moving very low in the understory, terrestrially to about 30 cm off the ground. This was our first observation of a tetraka that morning. The birds were significantly smaller than the Long-billed Tetraka (B. madagascariensis) and possessed a grayish head, a white throat, and a short and straight bill. The head was grey with green upperparts and the moderately long tail was straight and green. Further, on the afternoon of the same day at 06:00 pm we observed two individuals of a similar bird species, as observed that morning in low vegetation and foraging in the forest leaf litter.

The physical description and the behavior of these birds matched those of Appert's Tetraka (Xanthomixis apperti), a species considered Vulnerable in the 2008 IUCN Red Data Book (www.iucnredlist.org). One of the two observers was familiar with this species from previous fieldwork conducted in the Zombitse-Vohibasia forests (Goodman et al., 1994; Langrand & Goodman, 1997). Xanthomixis apperti originally described as a greenbul (family Pycnonotidae), when discovered more than 35 years ago (Colston, 1972), has been recently placed in the family Bernieridae, an endemic Malagasy radiation (Cibois et al., 2001; Goodman & Hawkins, 2008). This taxon was previously known only from the forests east of Toliara: specifically Vohibasia, Isoky Vohimena, and Zombitse (Goodman et al., 1994; Langrand & Goodman 1997) and Analavelona Forest (Raherilalao & Goodman, unpublished).

The observation of Xanthomixis apperti in Salary Bay located 90 km north-northwest of Toliara constitutes a significant range extension for this restricted endemic species. Salary Bay is 90 km from Analavelona, 140 km from Zombitse, and 150 km from Vohibasia-Isoky. This species occurs in the deciduous dry forests of Zombitse and Vohibasia forests, associated with the Western Malagasy Biome at altitudes of up to 730 m (Langrand & Goodman, 1997). It was subsequently found on the Analavelona Massif in 1998 at elevations reaching 1,050 m (Raherilalao & Goodman, unpublished) in a very particular habitat characteristic of the Western Humid Forest but with evergreen forest elements sustained by orographic precipitation (Moat & Smith, 2007). The vegetation type in Salary Bay belongs to the southwestern dry spiny forest-thicket a distinctive vegetation type found in southern Madagascar (Moat & Smith, 2007). The Zombitse-Vohibasia forests are under the status

of National Park since 1997 and cover 16,170 ha. The Analavelona Massif is an Important Bird Area and covers 9,675 ha (Fishpool & Evans, 2001). It is scheduled to become a protected area of 5,678 ha in 2009 (Ministry of the Environment, unpublished data). Salary Bay was gazetted in 2008 as a protected area as part of the Complexe Mikea, covering 371,340 ha (Ministry of the Environment, unpublished data). The forthcoming change in status of Analavelona and the recent declaration of Complexe Mikea as a protected area constitute significant improvements in the conservation status of the Appert's Tetraka.

To help to define the actual distribution of Xanthomixis apperti, surveys should be carried out to determine whether it has a largely continuous distribution between Zombitse-Vohibasia-Isoky, Analavelona, and Salary Bay. In extensive ornithological surveys conducted in the northern portion of the Mikea Forest, this species was not recorded (Raherilalao et al., 2004). It would also be useful to check if the individuals found in Zombitse-Vohibasia, Analavelona, and Salary Bay demonstrate any significant genetic difference. Further, it would be also interesting to collect information, possibly with banding studies, at different times of the year to identify local movements from the higher altitudinal areas, specifically Zombitse-Vohibasia at 730 m and Analavelona at 1,050 m, to the coastal forests such as near Salary Bay is taking place.

Literature cited

- Cibois, A., Slikas, B., Schulenberg, T. S. & Pasquet, E. 2001. An endemic radiation of Malagasy songbirds is revealed by mitochondrial DNA sequence data. *Evolution*, 55: 1198-1206.
- **Colston, P. R. 1972.** A new bulbul from southwestern Madagascar. *Ibis*, 114: 89-92.
- **Donque, G. 1972.** The climatology of Madagascar. In *Biogeography and ecology of Madagascar*, eds. G. Richard-Vindard & R. Battistini, pp. 87-144. The Hague, W. Junk.
- Fishpool, L. D. C. & Evans, M. I., eds. 2001. Important Bird Areas in Africa and associated islands: priority sites for conservation. Pisces Publications and BirdLife International, Newbury and Cambridge.
- Goodman, S. M. & Hawkins, A. F. A. 2008. Les oiseaux. Dans *Paysages naturels et biodiversité de Madagascar*, ed. S. M. Goodman, pp. 383-434. Muséum national d'Histoire naturelle. Paris
- Goodman, S. M., Langrand, O. & Razafimahaimodison, J. C. 1994. Les oiseaux. Dans Inventaire biologique de forêt de Zombitse, eds. S. M. Goodman & O. Langrand. Recherche pour le Développement, Série Sciences Biologiques, numéro spécial: 73-82.

Langrand, O. & Goodman, S. M. 1997. Les oiseaux. Dans Inventaire biologique de la forêt de Vohibasia et d'Isoky-Vohimena, eds. O. Langrand & S. M. Goodman. Recherche pour le Développement, Série Sciences Biologiques, 12: 131-143.

Moat, J. & Smith, P. 2007. Atlas of the vegetation of *Madagascar*. Royal Botanic Gardens Kew, Richmond.

Raherilalao, M. J., Goodman, S. M. & Willard, D. 2004.

Diversité de l'avifaune de la forêt de Mikea. Dans Inventaire floristique et faunistique de la forêt de Mikea:

Paysage écologique et diversité biologique d'une préoccupation majeure pour la conservation, eds. A. P. Raselimanana & S. M. Goodman. Recherches pour le

Développement, Série Sciences biologiques, 21: 53-67.

The Sooty Gull, Larus hemprichii (Aves: Laridae), on Nosy Ve: First records for Madagascar

Julien P. Renoult

Equipe Interactions Biotiques, Centre d'Ecologie Fonctionnelle et Evolutive, UMR 5175, 1919 route de Mende, F34293 Montpellier Cedex 5, France E-mail: julien.renoult@cefe.cnrs.fr

Résumé

Le 20 décembre 2007, un Goéland de Hemprich, Larus hemprichii, a été observé sur Nosy Ve (23°39'11"S, 43°36'05"E) au sud-ouest de Madagascar. Après consultation auprès d'observateurs régulièrement la région, il s'avère qu'un L. hemprichii avait déjà été vu sur cette île en octobre 2005 et que l'oiseau de 2007 était présent depuis le 18 octobre de cette année. Il est possible que ces observations correspondent à un unique individu revenant sur Nosy Ve, dont les colonies kenyanes qui constituent le site de reproduction de l'espèce le plus proche de Madagascar. L'observation de cet individu constitue la première de mention publiée de l'espèce pour Madagascar.

Introduction

On 20 December 2007, I visited Nosy Ve (23°39′11″S, 43°36′05″E), a small island off the coast of Anakao, extreme southwestern Madagascar, essentially to visit the colony of Red-tailed Tropicbirds (*Phaethon rubricauda*) inhabiting the southern portion of the islet. Other bird observations included large flocks of Lesser Crested Terns (*Sterna bengalensis*) and Greater Crested Terns (*S. bergii*) accompanied by some Crab Plovers (*Dromas ardeola*), Sanderlings (*Calidris alba*), and Turnstones (*Arenaria interpres*). Standing slightly apart from the terns was a bicolored gull, which showed distinct sooty upperparts contrasted by a pure white inferior third of the body.

A thin white collar separated the dark gray back from the dark gray-brown head. The flat forehead did not show any marked angle relative to the beak. The only contrasting pattern of the head was a white crescent above the eye. These are characters diagnostic of the Sooty Gull (Larus hemprichii). Further, based on images taken of the bird (Figure 1), additional distinctive characters of L. hemprichii were noted: the dark back plumage terminating in a triangular shape over a uniformly white and squared tail; the upperwings appeared uniformly dark gray except for a pronounced thin white trailing edge on the secondaries and inner primaries; the second to six primaries showed a distinctive white rachis, which become less distinctive towards the more inner primaries; the wing tips did not appear particularly pointed; the underwing coverts were dull brown, with coverts and axillaries being darker than the remiges; and the yellow beak was long, massive, and red tipped. The legs appeared quite dark but I was not able to note precisely the coloration. On 21 December 2007, an adult breeding L. hemprichii (probably the same individual) was observed flying along the coast, some 7 km north of Anakao (23°39'20"S, 43°37'56"E), with a flock of Sterna bergii.

Identification of the Nosy Ve gull

The number of large and dark bodied gulls in the world is rather limited (Del Hoyo et al., 1996). Only one species, Larus hemprichii in adult plumage, shows the sharp delimitation between the white belly and the dark gray-brown flanks and breast-band visible in the Nosy Ve bird. The narrow white collar is also characteristic of this species. Larus hemprichii can be confused with adult White-eye Gull (L. leucophtalmus), which occurs in part in sympatry