DIVERSIONARY BEHAVIOUR OF BRIDLED TERNS STERNA ANAETHETUS

CHRIS J. FEARE

WildWings Bird Management, 2 North View Cottages, Grayswood Common, Haslemere, Surrey, GU27 2DN, UK (feare_wildwings@msn.com)

Received 28 August 2008, accepted 4 April 2009

FEARE, C.J. 2009. Diversionary behaviour of Bridled Terns Sterna anaethetus. Marine Ornithology 37: 181-182.

During a brief visit to Recif Island, Seychelles (4°35'S 55°46'E), a small (13.2 ha), largely rocky islet, Bridled Terns Sterna anaethetus were seen indulging in behaviour that does not appear to have been previously recorded. Recif supports breeding populations of seven seabird species-Wedge-tailed Puffinus pacificus and Audubon's Shearwaters P. lherminieri, Sooty S. fuscata and Bridled Terns, Common Anous stolidus and Lesser Noddies A. tenuirostris, and White Terns Gygis alba—and is visited by White-tailed Tropicbirds Phaethon lepturus (which may breed) and frigatebirds (Lesser Fregata ariel and possibly Greater F. minor) that soar above the hilltop, presumably taking advantage of uprising air. The visit, 26-28 June 2002, was timed to coincide with the Sooty Tern breeding season in Seychelles (Feare 1976), and eggs of this species were just beginning to hatch. The noddies and White Terns were also breeding: Common Noddies with eggs; Lesser Noddies with eggs, but most with chicks; and White Terns with eggs. By chance, Bridled Terns, which breed in Seychelles approximately every eight months (Diamond 1976), were also incubating, and a few eggs hatched during the visit.

During the afternoon of 27 June, a Bridled Tern was watched for c. five minutes as it flew in front of one of four frigatebirds soaring over the hill. The tern's flight was fluttering, with rapid but irregular wing-beats. The tern remained about one frigatebird body length in front, and it fluttered from side to side while remaining within the frigatebird's wingspan. The frigatebird did not appear to react to the tern's behaviour, but at the end of this period of observation, the frigatebird wheeled away, and the Bridled Tern transferred its attention to another frigatebird that had been soaring behind the first, repeating the fluttering flight in front of this second bird. These two birds were watched for a further five minutes, but observations then had to stop because of the need for other studies.

The following day at c. 11h00, two Bridled Terns were seen, each behaving in the same way in front of different frigatebirds. They were not closely watched, however, because other work precluded prolonged observation, but periodic views indicated that the behaviour continued for tens of minutes at least.

This behaviour of Bridled Terns does not appear to have been described before (Cramp & Simmons 1983, Hulsman & Langham 1985, Gochfeld & Burger 1996, Higgins & Davies 1996, Haney et al. 1999). It appeared to involve more energy than the normal flight of Bridled Terns. Few birds (>1000) were estimated to be present on the island at the time of this visit, and in February 2003, when Bristol (2003) estimated the breeding population to be more than 3000 pairs, none were seen indulging in the behaviour.

My impression was that the behaviour was intended to harass the frigatebirds, either through visual interference or through disruption of the air currents in which the frigates were soaring.

In some seabird colonies, frigatebirds are predators of the chicks of other species (Ashmole 1963, Nelson 1967, Schreiber & Ashmole 1970), but in Seychelles, such predation is rare (Skerrett et al. 2001) and does not appear to have been recorded on islands, such as Recif, where frigatebirds do not breed. Kleptoparasitism by frigatebirds is, however, common in Seychelles, especially at large colonies of Masked Boobies Sula dactylatra (Rocamora et al. 2003) and Sooty Terns (pers. obs.). Bridled Terns breed on few islands in Seychelles, and most colonies are small, numbering tens or hundreds of pairs. Lack of reports of frigatebirds harassing Bridled Terns may reflect the comparative scarcity of opportunities for observing such interactions. Sooty Terns do not appear to attempt to counter kleptoparasitism by frigatebirds, apart from taking evasive manoeuvres when an individual is attacked. Their weaker flight and smaller numbers (often breeding at times when other more numerous species are not breeding) may render Bridled Terns more vulnerable to the attentions of frigatebirds. However, more observations of interactions between these species are needed to determine whether the behaviour reported here is widespread or is limited to a few individual Bridled Terns and whether Bridled Terns are indeed more susceptible to frigatebird kleptoparasitism than are other seabird species.

ACKNOWLEDGEMENTS

These observations were made during an expedition to Recif Island, organised by the Division of Environment, Ministry of Environment and Transport of the Seychelles Government, and I am grateful to Selby Remie, Director of Conservation, for making the arrangements.

REFERENCES

ASHMOLE, N.P. 1963. The biology of the Wideawake or Sooty Tern *Sterna fuscata* on Ascension Island. *Ibis* 103b: 297–364.

BRISTOL, R. 2003. Census of Bridled Terns *Sterna anaethetus* on Recif Island, February 2003 [unpublished report]. Mont Fleuri, Mahe: Nature Seychelles.

CRAMP, S. & SIMMONS, K.E.L. (Eds). 1983. Handbook of the birds of Europe, the Middle East and North Africa. Volume 3. Oxford, UK: Oxford University Press. 931 pp.

DIAMOND, A.W. 1976. Subannual breeding and moult cycles in the Bridled Tern *Sterna anaethetus* in the Seychelles. *Ibis* 118: 414–419.

- FEARE, C.J. 1976. The breeding of the Sooty Tern *Sterna fuscata* in the Seychelles and the effects of experimental removal of its eggs. *Journal of Zoology, London* 179: 317–360.
- GOCHFELD, M. & BURGER, J. 1996. Family Sternidae (terns). In: del Hoyo, J., Elliott, A., & Sargatal, J. (Eds). Handbook of the birds of the world. Volume 3. Barcelona, Spain: Lynx Edicions.
- HANEY, J.C., LEE, D.S. & MORRIS, R.D. 1999. Bridled Tern (Sterna anaethetus). In: Poole, A. & Gill, F. (Eds). The birds of North America. No. 468. Philadelphia, Pennsylvania: The birds of North America, Inc. 24 pp.
- HIGGINS, P.J. & DAVIES, S.J.J.F. 1996. Handbook of Australian, New Zealand and Antarctic birds. Volume 3. Melbourne, Australia: Oxford University Press. 1086 pp.

- HULSMAN, K. & LANGHAM, N.P.E. 1985. Breeding biology of the Bridled tern *Sterna anaethetus*. *Emu* 85: 240–249.
- NELSON, J.B. 1967. Etho-ecological adaptations in the Great Frigatebird. *Nature* 214: 318.
- ROCAMORA, G., FEARE, C.J., SKERRETT, A., ATHANASE, M. & GREIG, E. 2003. The breeding avifauna of Cosmoledo Atoll (Seychelles) with special reference to seabirds: conservation status and international importance. *Bird Conservation International* 13: 151–174.
- SCHREIBER, R.W. & ASHMOLE, N.P. 1970. Seabird breeding seasons on Christmas Island, Pacific Ocean. *Ibis* 112: 363–394.
- SKERRETT, A., BULLOCK, I. & DISLEY, T. 2001. Birds of Seychelles. London, UK: Helm. 320 pp.