

Short note

First records of the white-rumped sandpiper and brown-hooded gull south-east of the Antarctic Peninsula

VÁCLAV PAVEL and KAREL WEIDINGER

Department of Zoology and Laboratory of Ornithology, Faculty of Science, Palacký University, Tr Svobody 26,
771 46 Olomouc, Czech Republic
vaclav.pavel@upol.cz

Received 8 August 2012, accepted 7 September 2012, first published online 20 December 2012

Introduction

The close geographic relationship between South America and Antarctica (only 1000 km apart) and prevailing north-west winds south of the Patagonian coast allow some bird species to reach the Antarctic Peninsula (AP) (e.g. Montalti *et al.* 1999). The AP has been experiencing rapid regional warming and sea ice retreat over the past few decades (Štátná 2010) which has already been reflected in the breeding distribution and abundance of three local *Pygoscelis* penguin species (Lynch *et al.* 2012). Yet warming of the AP area is likely to also influence vagrant birds that might benefit from reduced sea ice and increased ice-free land (Korczak-Abshire *et al.* 2011).

Although the north-west AP is a relatively well surveyed area, documentation of bird populations south-east of the AP is surprisingly infrequent (e.g. Montalti & Soave 2002). James Ross Island (JRI) (64°10'S, 57°45'W) is a large island (2500 km²) situated 20 km south-east of the AP. The north-west part of the island is one of the largest ice-free areas in the AP region. Prior to the establishment of the Czech J.G. Mendel research station on the northern part of the island in 2005–06, there had been no systematic survey of birds. Here we report on the observations of two bird species, the white-rumped sandpiper (*Calidris fuscicollis* Vieillot) and the brown-hooded gull (*Larus maculipennis* Lichtenstein), on JRI (Fig. 1).

Observations

We conducted a survey of bird distribution on the ice-free area of the Ulu Peninsula, JRI, during three summers (January and February 2007/08, 2008/09, 2010/11).

A pair of white-rumped sandpipers was seen on 3–8 January 2009. The birds rested and foraged at two coastal lakes on Cape Lachman (63°47'46"S, 57°48'24"W, 9–15 m a.s.l.). The areas of lakes were 1.5 and 3 ha, a mean depth of 0.2 m (max 0.4 m). Both lakes have well developed littoral algae and a thick layer of fine sediments. The birds probably fed on the abundant crustaceans *Branchinecta gaini* Daday (Anostraca) and *Boeckella poppei* Mrázek (Calanoida) (Nedbalová *et al.* 2012). The birds were observed with a 20–60X telescope and photographed.

A single brown-hooded gull, an adult bird in breeding plumage, was seen at midday of 8 January 2011, flying along the coast between Cape Lachman and St Martha Cove (63°49'20"S, 57°48'38"W). The bird was observed for about ten minutes with 10X binoculars, together with Antarctic terns (*Sterna vittata* Gmelin) and kelp gulls (*Larus dominicanus* Lichtenstein), which facilitated its identification through a direct comparison of sizes in flight.

Discussion

The white-rumped sandpiper breeds in the Nearctic tundra and winters in South America up to Tierra del Fuego (Del Hoyo *et al.* 1996). It is reported as a common visitor to the Falkland Islands, rare on South Georgia, and an accidental visitor to the South Shetland (Couve & Vidal 2003) and South Orkney (Coria *et al.* 2011) islands. Yet, multiple records of up to 25 birds and increased frequencies of its occurrence over the last 30 years from the King George, Ardley and Nelson islands suggest that white-rumped sandpiper is currently a regular visitor to the South Shetland Islands (Korczak-Abshire *et al.* 2011 and references therein; Lumpe & Weidinger 2000, Peter *et al.* 2008). However, to our knowledge, there has been no firmly documented observation of this species from the AP or coastal Antarctica as yet. Surprisingly, the southernmost record (Rothera Point, 67°34'S, 68°08'W, Milius 2000) of any sandpiper species was ascribed to the pectoral sandpiper (*Calidris melanotos* Vieillot), a species which has never been reported even from the South Shetland Islands. The only other published record of a sandpiper-like bird (a likely candidate was the white-rumped sandpiper) south of the South Shetland Islands is from Palmer Archipelago, west AP (64°46'S, 64°03'W, Parmelee 1992; Fig. 1). Our present observation is thus the southernmost proven record of this species and the first one from the east AP.

The breeding range of the brown-hooded gull extends south up to Tierra del Fuego and the Falkland Islands (Del Hoyo *et al.* 1996). The species is an accidental visitor to South Georgia (Couve & Vidal 2003, Shirihai 2008), but until now, there has been no published observation from more southerly locations, including the well surveyed South Shetland Islands (e.g. Peter *et al.* 2008). Our observation is

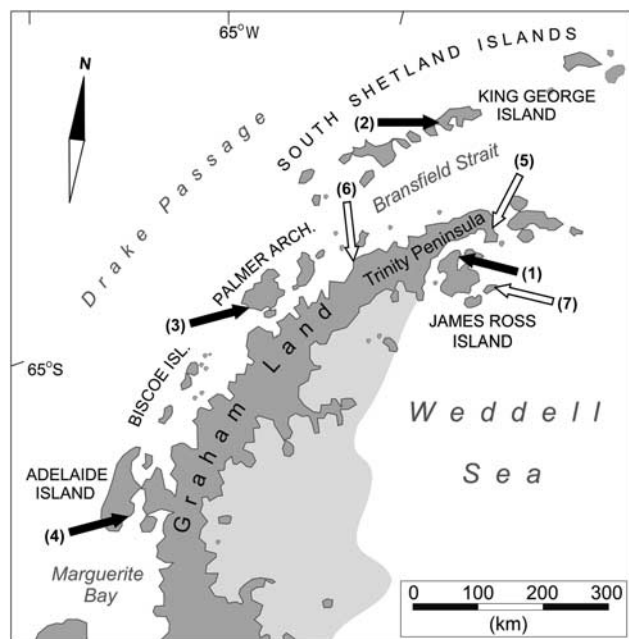


Fig. 1. Map of the north part of the Antarctic Peninsula (AP) with marked locations (filled arrows) of: (1) new records of the white-rumped sandpiper and brown-hooded gull at JRI, (2) the occurrence of the white-rumped sandpiper at the South Shetland Islands, (3) the probable occurrence of the white-rumped sandpiper at the Palmer area, and (4) the southernmost record of any sandpiper species, the pectoral sandpiper, at Rothera Point. Open arrows show the location of major bird survey areas along the AP where sandpipers have not been reported: (5) Esperanza Bay (Coria & Montalti 1993), (6) Cierva Point (Quintana *et al.* 2000), and (7) Seymour Island (Montalti & Soave 2002).

the southernmost record of this species, extending its range more than 1550 km south-west of South Georgia.

Although the climatic conditions of the east coast of the AP are generally harsher than on the west coast (Moriss & Vaughan 2003), the Ulu Peninsula of JRI is extensively deglaciated with a number of shallow lakes (Nedbalová *et al.* 2012) and adjacent to ice-free sea. Moreover, JRI lies in the precipitation shadow of the AP, which reduces seasonal changes in snow cover and also partly buffers the wind circulation (Láska *et al.* 2011). Thus the ice-free areas on JRI might offer a temporary refuge for vagrant birds after having crossed the Southern Ocean and the AP mountains. Given continued environmental change, the number of bird species visiting this area and frequency of their occurrence are likely to increase, as has already been seen in the more clement north-west coast of the AP.

Acknowledgements

This study was supported by the Czech Geological Survey, the Ministry of Education (MSM 6198959212), and Ministry of

Environment (VaV SP II 1a9/23/07) of the Czech Republic. The work in Antarctica was conducted under permission from the Ministry of Environment of the Czech Republic. Our thanks to the members of the J.G. Mendel station, to David Harderkopf for English corrections and to the reviewer.

References

- CORIA, N.R. & MONTALTI, D. 1993. Flying birds at Esperanza Bay, Antarctica. *Polish Polar Research*, **14**, 433–439.
- CORIA, N.R., MONTALTI, D., ROMBOLA, E.F., SANTOS, M.M., GARCIA BETOÑO, M.I. & JUARES, M.A. 2011. Birds at Laurie Island, South Orkney Islands, Antarctica: breeding species and their distribution. *Marine Ornithology*, **39**, 207–213.
- COUVE, E. & VIDAL, C. 2003. *Birds of Patagonia, Tierra del Fuego & Antarctic Peninsula. The Falkland Islands & South Georgia*. Punta Arenas: Fantástico Sur, 656 pp.
- DEL HOYO, J., ELLIOT, A. & SARGATAL, J., eds. 1996. *Handbook of the birds of the world*. Vol. 3. Hoatzin to auks. Barcelona: Lynx Edicions, 821 pp.
- KORCZAK-ABSHIRE, M., ANGIEL, P.J. & WIERZBICKI, G. 2011. Records of white-rumped sandpiper (*Calidris fuscicollis*) on the South Shetland Islands. *Polar Record*, **47**, 262–267.
- LÁSKA, K., BARTÁK, M., HÁJEK, J., PROŠEK, P. & BOHUSLAVOVÁ, O. 2011. Climatic and ecological characteristics of deglaciated area of James Ross Island, Antarctica, with a special respect to vegetation cover. *Czech Polar Reports*, **1**, 49–62.
- LUMPE, P. & WEIDINGER, K. 2000. Distribution, number and breeding of birds at the northern ice-free areas of Nelson Island, South Shetland Islands, Antarctica, 1990–1992. *Marine Ornithology*, **28**, 41–46.
- LYNCH, H.J., NAVEEN, R., TRATHAN, P.N. & FAGAN, W.F. 2012. Spatially integrated assessment reveals widespread changes in penguin populations on the Antarctic Peninsula. *Ecology*, **93**, 1367–1377.
- MILIUS, N. 2000. The birds of Rothera, Adelaide Island, Antarctic Peninsula. *Marine Ornithology*, **28**, 63–67.
- MONTALTI, D. & SOAVE, G.E. 2002. The birds of Seymour Island, Antarctica. *Ornithologia Neotropical*, **13**, 267–271.
- MONTALTI, D., ORGEIRA, J.L. & DI MARTINO, S. 1999. New records of vagrant birds in the South Atlantic and in the Antarctic. *Polish Polar Research*, **20**, 347–354.
- MORISS, E.M. & VAUGHAN, D.G. 2003. Spatial and temporal variation of surface temperature on the Antarctic Peninsula and the limit of variability of ice shelves. *Antarctic Research Series*, **79**, 61–68.
- NEDBALOVÁ, L., NÝVL, D., KOPÁČEK, J., ŠOBR, M. & ELSTER, J. 2012. Freshwater lakes of Ulu Peninsula, James Ross Island, north-east Antarctic Peninsula: origin, geomorphology and physical and chemical limnology. *Antarctic Science*, 10.1017/S0954102012000934.
- PARMELEE, D.F. 1992. *Antarctic birds, ecological and behavioural approaches*. Minneapolis, MN: University of Minnesota Press, 253 pp.
- PETER, H.-U., BUESSER, C., MUSTAFA, O. & PFEIFFER, S. 2008. *Risk assessment for the Fildes Peninsula and Ardley Island, and development of management plans for their designation as Specially Protected or Specially Managed Areas*. Dessau: German Environmental Agency, <http://www.umweltdaten.de/publikationen/fpdf-l/3478.pdf>.
- QUINTANA, R.D., CIRELLI, V. & ORGEIRA, J.L. 2000. Abundance and spatial distribution of bird populations at Cierva Point, Antarctic Peninsula. *Marine Ornithology*, **28**, 21–27.
- SHIRIHAI, H. 2008. *The complete guide to Antarctic wildlife: birds and marine mammals of the Antarctic continent and the Southern Ocean*. Princeton, NJ: Princeton University Press, 544 pp.
- ŠTASTNÁ, V. 2010. Spatio-temporal changes in surface air temperature in the region of the northern Antarctic Peninsula and South Shetland Islands during 1950–2003. *Polar Science*, **4**, 18–33.