

ROGACHEVA, E.V. 1992. *The Birds of Central Siberia*. Husum: Husum Druck- und Verlagsgesellschaft. 737pp.

Here is the first major review of the avifauna of central Siberia in English. It is important in several ways.

1. The area covered, 2.4 million km<sup>2</sup>, is large, about the same as South Africa, Botswana and Namibia. It straddles a roughly rectangular section of Russia, about 1 000 km from east to west, and an impressive 3 000 km from north to south, roughly the equivalent of Cape Town to the Congo River.
  2. It covers a part of the earth's land surface which is very remote from the influences of the oceans, the Atlantic and Pacific Oceans being roughly equidistant. As a result, the natural vegetation zones are relatively undistorted and occur in classical text-book style, running roughly east-west. Professor Rogacheva recognises 14 such zones, ranging from polar desert in the north, through the various types of tundra, the forest-tundra ecotone that separates the tundra from the coniferous forest belt being classified into various zones of taiga, followed by the forest-steppe ecotone, and finally the steppe zone in the south.
  3. The Yenisey River, long recognized as the major biogeographical boundary in the Palearctic region, runs through the study area. Here one finds the western limits of the distributions of many east Asian species and the eastern limits of European species.
  4. The book provides a unique access into the Russian faunistic literature – all except three of the c. 350 papers cited are in Russian, many in obscure and little known publications which had limited print runs, and are almost unobtainable. In addition, it draws on the unique experience of the author and other scientists of the Institute of Evolutionary Morphology and Animal Ecology of the Russian Academy of Sciences. This institute has been engaged in studies of central Siberian birds for over 35 years. 371 species are dealt with, 155 passerines and 216 non-passerines. For the more common species, the species accounts cover three or more pages of the book, even the Stonechat *Saxicola torquata* (yes, the same as ours!) receives nearly four pages.
  5. For southern African ornithologists (and especially ringers) central Siberia is of special interest because it is the breeding place, either proven or suspected, of many of our migrants. Apart from species regarded as vagrants either by Rogacheva for central Siberia or by Maclean for southern Africa, 53 species occur as breeders there and summer migrants here. There are ringing recoveries linking southern Africa with central Siberia for only four of these species: Steppe Buzzard *Buteo buteo vulpinus*, Curlew Sandpiper *Calidris ferruginea*, Sanderling *C. alba* and European (!) Swallow *Hirundo rustica*. Rogacheva considers the non-breeding areas of most of the species breeding in central Siberia to be unknown, as are the breeding origins of many species spending the southern summer in southern Africa. There are still lots of discoveries for ringers to make!
- A further 22 species (like the Stonechat) have substantial breeding

populations in both central Siberia and southern Africa (plus the introduced [to southern Africa] species House Sparrow *Passer domesticus* and European Starling *Sturnus vulgaris*). These conquerors of the latitudes are at the northern and southern limits of their breeding distribution in central Siberia and southern Africa, and comparative studies would be of great interest. For example, taking the information on Stonechats in Maclean and Rogacheva, clutches contain 2-5 eggs in southern Africa (mean clutch size 3.2) while the range in central Siberia is 4 to 8 eggs (mean 5.7). Incubation periods here are 14-15 days, but only 11-13 days there. At both ends only the female incubates. The nestling period is 13-16 days here, but 10-14 days there. Ringing studies would enable survival rates to be compared – what predictions would you make?

In the species accounts, which occupy the bulk of the text, the available data from each study site is well summarised and the sources given. Dates of arrival and departure from the breeding areas are considered, along with densities within the various zones. Available information on the occurrence of a species on northward and southward migration is discussed, with a view to tracing migration routes. The synthesis of all this information is largely left to the reader. Thus *The Birds of Central Siberia* is not a book to read quickly. One also struggles with place names that are unfamiliar, the gazetteer (giving coordinates) is incomplete. There is a frequent practice of giving only the latitude of a locality – this is understandable because of the emphasis on the zones and dates along the north-

south transect at which a species arrives, breeds and departs. However, there are rich rewards for the persevering reader: with patience, it is possible, for example, to produce an annotated map showing in which zones each species breeds at greatest densities, and how this fades off to the north and to the south.

Following the species accounts are two summary chapters. The first deals with the Yenisey biogeographic boundary which dates back to the Tertiary. The chapter summarises the species that occur on either side of the barrier, and describes how, particularly in the south, it has broken down under human influences, mainly timber felling and agriculture, allowing some European species to expand their ranges eastwards. The second chapter considers conservation issues under the heading *Protection and Rational Use of Birds*. 39 species are in the Red Data Book for Russia, and a further 72 species are locally rare, so that Rogacheva considers 111 species (out of 371) to be in need of some form of protection. There are 48 species in the two main groups of game birds, Anseriformes and Galliformes, and Rogacheva considers appropriate and realistic hunting regulations for these species, and which species need blanket protection. For the waterfowl, she recommends a network of 24 wetlands to protect them at breeding, moulting and migration stopover sites.

All in all, this is a fascinating and important book, an ornithological window into a part of the world with which southern Africa almost certainly has many more migration links than we ringers have currently demonstrated.

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