

The Migration of Birds of Prey in the Northern Red Sea Area: Report of the 1982 Suez Study by David Wimpfheimer, Bertel Bruun, Sherif M. Bahael Din and Michael C. Jennings with contributions by William S. Clark, Carsten Jensen, Donald Parr and Ib Petersen, and forward by Dean Amadon. Arabic summary by Assad Serhal. 80 pp., 6 Tables, 24 Figures, 2 Appendices, 10 plates. Available from the Holy Land Conservation Fund, 1825 Eye Street Northwest, Suite 400, Washington, DC 20006. **\$20.00 U.S.**

Whenever the nation of Egypt is mentioned, thoughts come to mind of the pharaohs, the great pyramids and the sphinx. One also remembers Egypt's biblical and more recent history, both closely tied to the nation of Israel. Thoughts of migrating raptors do not immediately come to mind. Yet this report has made it apparent that a spring migration of raptors does occur over the lands of Egypt, and undoubtedly has done so since before the great pyramids were built.

The report describes the initial results of the Holy Land Conservation Fund's expedition to Suez, Egypt, in the spring of 1982. As a result of many individual efforts and outstanding support from numerous individuals and agencies, both in the United States and Egypt, the authors have provided students of raptor migration with a data base for reference and future comparison for the Middle East. All of the authors except one have previous experience with Eurasian raptors. Observational data are reported for 124,996 raptors, representing 28 species, sighted during the period 23 February - 16 May 1982. The primary goal of the study was to learn more about the spring migration of raptors at or near Suez, Egypt, and towards that goal the authors have a good start. However, there is some question as to whether the report effectively establishes the Suez area as a concentration point as stated. Certainly there is a substantial spring overfly in the region, but the evidence supports the idea that raptors do not initiate migrations in the immediate vicinity of the city of Suez, and thus do not concentrate themselves in the area.

A species by species account of sightings by time period and a seasonal total is provided for each of the 28 species tallied. Comparisons by species are made with other regions, particularly Eliat, Israel. Six species, *Buteo b. vulpinus*, *Aquila nipalensis*, *A. pomarina*, *Milvus migrans*, *Circaetus gallicus* and *Neophron percnopterus* accounted for 90% of total sightings. Sightings of *B. b. vulpinus* alone accounted for almost 65% of total numbers, but the *vulpinus* tally is biased by the inclusion of all *B. buteo* sightings with the *vulpinus* totals, as pointed out by the authors. Less than 10 individuals were tallied for 12 species. Observational data for 214 non-raptors are provided in Appendix A, which includes 3 new sightings for Egypt. Histograms of related species are provided depicting total numbers versus date. The figures could have been combined in many cases, especially Figures 14 and 15 and Figures 17 and 18. Analysis by 5-day interval would have been most helpful and welcome, but such was provided only for accipiters, which represented 0.2% of total sightings.

At least 2 observers were present on most days, and there was a gap in continuous coverage during early April when no observations were made. In order to compensate for these gaps, the authors extrapolated data for observations both before and after periods of no coverage. On this basis, adjustments were calculated for selected species, including *Aquila* sp., *A. pomarina* and *A. nipalensis*. Adjustments were made with the assumption that the proportions of identified *Aquila* is the same as unidentified, which is confusing. However, these adjustment figures do not appear in final tallies and conclusions. Virtually every individual raptor sighted was identified at least to genus, and no "unidentified" category appears in the final tallies. As one who has observed North American migrations over the years, it is simply not possible to always pinpoint an individual, though worthy a goal such identification may represent.

Intermittent observations made in areas adjacent to Suez were also accomplished. Brief summaries are provided for Hurghada and surrounding area, for northern Sinai between El Arish and Nakhli, for Ismalia north of Suez (all observations accomplished by one or more of the authors), and summaries of previous reports in the literature for the region and for Eliat, Israel. Previous reports and more recent studies indicate the migration at Eliat is substantially greater than reported for Suez and surrounding areas (W.S. Clark, pers. comm.). Also included is a chapter on raptor migration in the Middle East which provides the reader with a nice comparison as well as a substantial reference list.

As the authors point out, their attempts to correlate meteorological factors with their observations needs further study. Purely qualitative evaluations of wind direction, wind strength(?) (only for surface winds), and cloud cover are provided with species tallies. Qualitative assessment carries over into observations, where individuals are grouped under the heading of being either an "active" or "passive" migrant based upon convection current utilization (Table 6) (after studies of raptor migration in Denmark by B. Bruun and O. Schelde, 1957, *Efterarstraekker pa Stigsnaes, S.V. Sjaelland, D.O.F.T. 51:149-167*). The usefulness of such categorization seems questionable, since any individual of any species may either actively or passively utilize convection currents at any given time.

Appendix B summarizes human threats to migrating raptors. Although there is little evidence of direct persecution such as shooting (Plate 4 of a "hunter" displaying 2 recently shot Steppe Eagles notwithstanding), potential for harm from chemical dumping and industrial pollution does exist in the Suez area. No mass kills have been reported, but as with most chemical contaminants, raptors that feed, bathe, or drink while enroute through the region probably pick up harmful compounds which would be transported back to breeding territories.

Overall, the report provides valuable data to the ever-growing worldwide raptor migration picture. Sherif Ben el Din's illustrations evidence a keen familiarity with migrant raptors enroute through Suez. A more comprehensive assessment of observations would have been a welcome addition. Nevertheless, an 82-item literature section is provided which helps to substantiate the report as a basis for comparison with future raptor migration studies in the Middle East. — Jimmie R. Parrish.

ERRATUM — Volume 18(4), page 159. Paul Springler should be Paul Springer. The Editorial Staff apologizes to Paul for failing to catch the misspelling before final printing.