Commentary

A GLOBAL SNAPSHOT OF AVIAN TISSUE COLLECTIONS:
STATE OF THE ENTERPRISE

MARK STOECKLE1 AND KEVIN WINKER2,3

1Program for the Human Environment, The Rockefeller University, 1230 York Avenue, New York, New York 10065, USA; and
2University of Alaska Museum, 907 Yukon Drive, Fairbanks, Alaska 99775, USA

In connection with the All Birds Barcoding Initiative (ABBI), one of us (M.S.) conducted a survey of the world’s avian tissue collections at the species level (following Clements 2007). The information was compiled from online databases or summaries provided by collection managers and was accessed or obtained between March 2007 and January 2009. To harmonize taxonomic names among collections, a spreadsheet utility (Stoeckle 2008) was constructed that converts synonyms, alternate spellings, and subspecies into the names used by Clements (2007); incompletely identified (e.g., generic name only) and hybrid specimens were not included.

In all, 29 of 32 collections queried provided data on their holdings, which at the time of the survey represented at least 317,299 specimens of 7,228 species (Table 1). Tissue holdings among these collections spanned three orders of magnitude, from <99 to >40,000 samples; 12 collections—fewer than half—held >10,000 samples, and only 10 had >1,000 species represented (Table 1).

Genetic samples associated with vouchered specimen material, such as a skin that enables morphological identification, represent a desirable, high-quality standard for tissue collections, and vouchered collections were our focus. Benefits from vouchering include replicability and the availability of comparative phenotypic and other data (Winker et al. 1996, Ruedas et al. 2000, Bates et al. 2004, Peterson et al. 2007). Among collections reporting this information, the percentage of vouchered genetic holdings varied from 40% to 100% (Table 1).

To enable the most complete global snapshot possible, our compiled survey maintained anonymity for holdings of individual collections. This allows material obtained for short-term research interests to be counted as present in long-term archives. Together with many of the participants, we look forward to increased electronic access through institutional websites and community initiatives such as ORNIS (see Acknowledgments).

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