Body Masses of Birds of the World

John B. Dunning, Jr., Project Leader

Patrick Ruhl weighing a bird during banding. Photo by Jeff Riegel.

Cooperators:
Ruhl, Dr. Patrick. Harding University, Searcy, AR.

Goals:
To provide a ready source of the best available data on avian body masses for all birds of the world.

Recent Publications:
Ruhl, P.J. and J.B. Dunning. 2015. Morphometrics of Worm-eating Warblers in south-central Indiana: Hatch-year and after-hatch-year comparison. North American Bird Bander, 43:81-84.
Dunning, J.B. 2018. Body masses of North American Birds. International Wildlife Rehabilitation Council, Eugene, OR.
Doughty, C.E., J. Roman, S. Faurby, A. Wolf, A. Haque, L. Bakker, Y. Malhi, J.B. Dunning, J.-C. Svenning. 2016. Global nutrient transport in a world of giants. Proceedings of the National Academy of Sciences 113:868-873.
Dunning, J.B. 2007. CRC Handbook of Avian Body Masses. CRC Press, Boca Raton, FL. Second edition.

Updates (August 2023):
Since the publication of the second edition of the CRC Handbook, I have compiled more data from published and unpublished sources. The links below provide updates to the body mass database, and the reference sources. The data update is a PDF file (so that it is compatible with the e-version published with the second edition) following the same format as the CRC Handbook with the following exceptions:

- A column on "Book Status" has been added. Data are labeled as N = species new to the database, B = better data than found in the 2nd edition, or E = taxonomic change, but data found in second edition.
- A "source" column is added to allow citations to be found in the attached Reference file.
- A "comments" column is added.

Statement of Problem:
Many forms of ecological research use an estimate of body size as a critical metric for comparative research. Ecological studies of community structure often use body size as a measure of similarity among species, while allometry explicitly relates variation in life histories to body size. For birds, the single most useful measure of body size is adult body mass. Although linear measurements have been routinely collected on birds for over 100 years, body mass is a truer measure of overall avian size. Unfortunately, data on body mass are often scattered in unpublished sources such as banding records. Ornithologists did not begin to collect body masses routinely until the mid-1970s, when convenient field scales became available. Therefore the majority of museum specimens and most research projects conducted before the 1970s are not a source of information for this critical measurement.

Current Activities:
Since the 1980s, I have compiled published and unpublished data on adult avian body masses and published a series of handbooks. A 1984 monograph published by the Western Bird Banding Association had data for North American species, while a 1992 CRC Handbook contained data for about 6300 species worldwide. These publications have been widely cited in a variety of ornithological and ecological research. I have continued to seek out new data since the publication of the CRC Handbook with the result that a second edition was published in 2007 with data for 8600 of the world's 10,000 birds. A large benefit of the second edition is that an electronic, searchable version of the database was included as a CD with the handbook. Updates since 2007 have been presented as a link to this webpage. In addition, the compilation of data for North American species has now been revised and republished as a new monograph by the International Wildlife Rehabilitation Council.