

## Patuxent's Biological Survey Unit

**Mission Statement:** Scientists and staff of the USGS Patuxent Wildlife Research Center stationed at the Smithsonian National Museum of Natural History (NMNH) do research on the systematics and conservation of vertebrate species and curate and manage the North American collections of Amphibian, Reptile, Bird, and Mammal specimens and associated records.

**Museum Science** – Museum-based systematics research provides an evolutionary framework for understanding the diversity, relationships, and natural history of species of vertebrates and is crucial to managing ecological systems in biologically meaningful ways. Assessing the status, population trends, and abundance of taxa requires an appreciation and understanding of their biology and the functional roles they play in biotic systems. Sound taxonomy and reliable statistics are vital for management and conservation planning by resource agencies and organizations.



The Biological Survey Unit (BSU) of the USGS Patuxent Wildlife Research Center stationed at the NMNH in Washington, D.C., traces its roots back to a formal partnership with the Smithsonian Institution established in 1889. The BSU biologists at the NMNH conduct original research on the systematic relationships, nomenclature, and biodiversity of four groups of vertebrates: amphibians, reptiles, birds, and mammals, that are part of the National Collection housed in the NMNH. They contribute to our understanding of biodiversity by discovering and describing new taxa, determining evolutionary relationships among taxa, and providing taxonomic identifications and general museum support to several agencies within the Department of the Interior (e.g., FWS), as well as to other federal agencies. Taxonomic and methodological expertise in the BSU continues

to make important contributions to the preparation and revision of authoritative checklists of vertebrates and authoritative guides for measuring and monitoring biodiversity around the world. In addition, BSU scientists provide important expertise on behalf of the USGS to the Integrated Taxonomic Information System (IT IS), a standard for scientific nomenclature adopted by the Federal government.



Through a Memorandum of Understanding, the BSU and the NMNH cooperate in areas of mutual interest and concern in research, collection care, and information management. The BSU shares laboratory facilities and research tools with the NMNH and both parties jointly develop policies established to benefit the care and use of the collections and associated data. The BSU has curatorial responsibility for approximately 1,000,000 scientific specimens of North American amphibians, reptiles, birds, and mammals that are used by a broad spectrum of investigators concerned with topics of international, national, and regional scopes. North America as used herein includes all the North American Continent extending from the Panamanian/

Colombian border to the North Pole, Hawaii, the Bahamas, and the West Indies. In addition to the collection-based research, primary staff responsibilities include caring for and managing the collections and associated records, curating selected segments of the collections, collecting and processing new materials for addition to the collections, making identifications, assisting visitors in the use of collection resources, transacting loans of study specimens, processing requests for information about specimens and their associated data, and answering questions from the public about amphibians, reptiles, birds, and mammals.

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