

The USNPC at the NMNH, 10 years later, and preliminary results of genome skimming of avian cyclophyllideans

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The US National Parasite Collection (USNPC), an irreplaceable resource for biodiversity science, complex host-parasite systems, and emerging disease, is among the largest and most active parasite collections in the world. It was transferred to the Smithsonian's National Museum of Natural History (NMNH) from the US Department of Agriculture (USDA), Animal Parasitic Diseases Laboratory in 2013–2014. The USNPC is comprised of more than 93,600+ specimen lots (89,000+ lots acquired from the USDA), consists of parasitic members of 36 phyla and more than 15,800+ type lots including 3,840 holotypes. For cestodes, the Collection has 16,700+ cestode specimen lots including 2,500+ cestode types.

Now, 10 years later, I will provide an update on improvements we have made to the specimen curation and data management, introduce you the NMNH collections management staff and their responsibilities, as well as give an overview of future improvement projects. We are also able to accept with notice frozen tissue samples, whole organisms, and DNA extractions into the NMNH Biorepository. I will also provide preliminary results of genome skimming of cyclophyllideans from birds. We have been able to successfully recover whole mitogenomes from ethanol-preserved specimens, but extracting ribosomal genes from the sequencing data has been more challenging.