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Cestodes of the family Hymenolepididae (Cestoda: Cyclophyllidea) parasitic in birds of the families Anatidae and Rallidae in Bulgaria

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Abstract: The present study is the first attempt for a comprehensive survey on the diversity, morphology, taxonomy, host range and distribution of cestodes of the family Hymenolepididae from Anatidae and Rallidae in Bulgaria. It is based on the examination of 242 host individuals of 18 species of Anatidae and 2 species of Rallidae. As comparative materials, specimens from the collections of the Institute of Biodiversity and Ecosystem Research – Sofia, Natural History Museum of Geneva and U.S. National Parasite Collection were used. The examination of the present material and the review of the published data reveal that 59 species of 18 genera of Hymenolepididae from Anatidae and Rallidae have been recorded in Bulgaria. Redescriptions of 38 species are presented on the basis of specimens from Bulgaria. Twelve species are recorded for the first time for the fauna of the country: *Anatinella spinulosa*, *Diorchis brevis*, *D. asiatica*, *D. inflata*, *D. visayana*, *Echinocotyle minutissima*, *Fimbriarioides intermedia*, *F. tadornae*, *Retinometra longivaginata*, *R. longistylosa*, *Sobolevicanthus longistyleticus* and *Wardoides nyrocae*. The examination of comparative materials from elsewhere detected for the first time *Diorchis americana* and *D. visayana* in France; the latter species is recorded for the first time for the Palearctic fauna. A new species is described, i.e. *Diorchis thracica* Marinova, Georgiev & Vasileva, 2015 from *Tadorna ferruginea* in Bulgaria. The taxonomy of the genus *Diorchis* Clerc, 1903 is improved by the redescription of the types of the type species *Diorchis acuminata* (Clerc, 1902) and the designation of lectotype, a detailed analysis of its diagnostic characters and the recognition of *D. ransomi* Johri, 1939 and *D. longibursa* Steelman, 1939 as its new junior synonyms. The examination of types or voucher specimens of *D. americana* Ransom, 1909, *D. inflata* Ransom, 1810 and *D. visayana* Tubangui & Masilungan, 1937 has elucidated their diagnostic characters and confirmed them as specific parasites of Rallidae. The species diversity of hymenolepidids from Anatidae and Rallidae in Bulgaria represents 45.38% of the species and 72% of the genera recorded in Europe. The highest levels of similarity are revealed between the fauna of the group in Bulgaria with those in Ukraine, Poland, Slovakia and Slovenia. The majority of the species recorded in Bulgaria (79.7%) are characterised by large geographical ranges (Holarctic, Palearctic, Holarctic-Oriental, sub-cosmopolitan and cosmopolitan). Twenty species of Anatidae and two of Rallidae have been recorded as hosts of hymenolepidids in Bulgaria. The species occurring in Anatidae are mostly euryxenous while those in Rallidae are stenoxenous.