



TAXONOMY OF *BAIRDIELLA* (GILL, 1861) (SCIAENIDAE) FROM THE WESTERN ATLANTIC, WITH THE DESCRIPTION OF A NEW SPECIES

Jonas Andrade-Santos¹ Tárcia Fernanda da Silva² Simoni Santos³ Marcelo Ribeiro de Britto⁴

RESUMO

Since the last revision of the genus Bairdiella, the number of valid species doubled. Nonetheless, molecular evidence suggests an unknown diversity in the North Atlantic. Herein, we describe a new species from the Gulf of Mexico, redescribing its sister species B. chrysoura, and provide a new key to the species. For the morphological data, we performed linear analysis on approximately 200 museum specimens and explored the dataset using boxplot and PCA analyses. For the molecular data, we used cytochrome oxidase C subunit I (COI) sequences obtained from GenBank, and species delimitation based on the Automatic Barcode Gap Discovery (ABGD), Generalized Mixed Yule Coalescence (GMYC), and Bayesian Poisson Tree Process (bPTP) methods. Bairdiella sp. n. differs from B. chrysoura by a slender caudal peduncle, less than 55% of the length of the caudal peduncle (vs. more than 55% of the length in B. chrysoura), and a more elongate body, less than 33% of SL (vs. more than 34% of SL in B. chrysoura). Both species differ from other Bairdiella species by a short and thin second spine of the anal fin, with its length not surpassing the end of the dorsal fin and spine width (at the base) equal to the height of the posterior nostril (vs. spine surpassing the end of the dorsal fin and spine width more than twice the height of the posterior nostril in *B. goeldi* and *B. ronchus*). Bairdiella ronchus differs from B. goeldi by a longer pelvic-fin spine, more than 60% of pelvicfin length (vs. less than 60% of pelvic-fin length). Bairdiella sp. n. differs from B. veraecrucis by six pores on the chin (vs. five). Species delimitation analyses using COI further support this new lineage in North Atlantic Bairdiella. However, the distribution boundaries between both species are still uncertain.

Palavras-chave: North Atlantic, Species delimitation, Taxonomic studies.

www.ehi.hio.hi

• Email

¹ Doutorando do Curso de Zoologia do Museu Nacional - Universidade Federal do Rio de Janeiro - UFRJ, <u>jonasandrade@ufrj.br;</u>

² Instituto de Estudos Costeiros - Universidade Federal do Pará – UFPA, <u>tarciafernanda.silva@gmail.com</u>;

³ Instituto de Estudos Costeiros - Universidade Federal do Pará – UFPA, <u>simoni@ufpa.br</u>;

⁴ Professor orientador: Doutor, Museu Nacional - Universidade Federal do Rio de Janeiro - UFRJ <u>mrbritto@mn.ufrj.br;</u>