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Hypotrichous ciliates (Protozoa: Ciliophora) from a temporary pond in Argentina, with redescription of *Apoamphisiella hymenophora* (Stokes, 1886) Berger, 1999

GABRIELA C. KÜPPERS[1] & MARÍA C. CLAPS
Instituto de Limnología Dr. Raúl A. Ringuelet CONICET-CCT La Plata, Boulevard 120 y 62, (1900) La Plata, Buenos Aires, Argentina
[1]Corresponding author. E-mail: gkuppers@fcnym.unlp.edu.ar

Abstract

Hypotrichous ciliates collected in the plankton and soil samples from a temporary pond in Buenos Aires province, Argentina, were characterized after live observations and protargol impregnation. *Apoamphisiella hymenophora* (Stokes) Berger is redescribed and the neotype material deposited. *Apoamphisiella hymenophora* differs from its congeners in having 2 macronuclear nodules, 1 contractile vacuole with anterior and posterior collecting canals, the absence of cortical granules, 2 cirri behind the rightmost frontal cirrus, 1 postoral cirrus, 6 dorsal rows of dikinetids along with scattered dikinetids on the right body margin, and 3–9 caudal cirri arranged in groups at the ends of dorsal rows 1, 2, and 4. *Rigidohymena candens*, *R. quadrinucleata*, *Histriculus histrio*, *Gastrostyla steinii*, and *Pseudouroleptus caudatus* are new for the Argentine microfauna. Since especially the soil ciliates have been almost unexplored in South America, the results from the present investigation describe and contribute to the knowledge of the diversity of these microorganisms within this geographical region.

Key words: Hypotricha, morphology, neotype, soil, freshwater, Buenos Aires

Introduction

Ciliates are among the most diverse groups of microorganisms in the Protozoa kingdom, numbering at about 8,000 known species (Lynn 2008). Nevertheless, ciliate diversity still remains highly underestimated because of a combination of circumstances—namely, undersampling, misidentifications, the lack of trained taxonomists interested in ciliates mostly outside Europe and China, and the lack of conservation programs that focus on microorganisms, among other shortcomings (Foissner 2006, 2008). The number of free living ciliates has been estimated to be as many as 30,000 different species (Foissner 2006). Freshwater and soil ciliates from the Neotropical Region have been only little investigated through modern methods, such as silver impregnation, electron microscopy, and/or molecular-genetic techniques. In the last decade, Paiva and Silva-Neto (2004a, b, c, 2005, 2006, 2007, 2009), Paiva *et al*. (2009, 2012), Küppers *et al*. (2006, 2007a, b, 2009, 2011), and Küppers and Claps (2010, 2012) described the morphology and phylogeny of either new or poorly known ciliates from Brazil and Argentina. Indeed, the soil ciliates in particular are almost uninvestigated in South America.

Hypotrichous ciliates are generally dorsoventrally flattened, substrate-oriented organisms and characterized by the presence of compound cilia called cirri on the ventral surface along with rows of dikinetids on the dorsal surface (Lynn 2008).

The present work provides morphological and biometric data on six hypotrichous ciliates based on observations on live and protargol-impregnated organisms. *Apoamphisiella hymenophora* (Stokes, 1886) Berger, 1999 is redescribed and neotype material deposited. The other ciliates represent new records for the Argentine microfauna.

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