

Euglenas under the International Code of Nomenclature for algae, fungi, and plants: a practical approach

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Abstract. The present work intends to demonstrate why the euglenas (*Euglenophyceae*) should be treated under the International Code of Nomenclature for algae, fungi, and plants (ICN, from now on). Most comprehensive treatments for the group have been made under previous versions of the ICN, and Google Scholar provide more hits when botanical terms (as “euglenophyta, euglenophyceae”) are introduced than when zoological terms (“euglenid, euglenozoa”) are used. Finally, recent scholars dealing with these algae considered themselves botanists.

INTRODUCTION

Euglenas have been treated under the ICN and the Zoological Code (ICZN) as well in old and recent bibliography. Most of the times, colourless species were treated as protozoans, while plastid-bearing ones were considered algae. However, this separation is artificial (Acleto & Zúñiga, 1998; Marin, Palm, Klingberg, & Melkonian, 2003).

MATERIALS AND METHODS

Searches were conducted in Google Scholar in December 31st, 2015 at 12.00 m (GMT - 5). All results were annotated in Microsoft Excel 2015.

RESULTS

In order to achieve a unified nomenclature, we believe that the ICN should be used. Not only because is the commonest treatment for euglenas currently (Table 1), but also because major nomenclatural and taxonomical works for this group have been made by botanists (David Patterson, Jacob Larsen, Boris Skvortsov) under the botanical code.

Table 1 Hits in Google Scholar for terms used to name the euglenas as a group. Names in italic are scientific ones. All searches were made the last day of 2015.

Hits in Google Scholar (December 31 st , 2015)					
Botanical terms	Hits	2011-2015	Zoological terms	Hits	2011-2015
<i>Euglenophyta</i>	6430	2490	<i>Euglenozoa</i>	2990	1160
			<i>Euglenida</i>	1030	212
<i>Euglenophyceae</i>	7310	1900	<i>Euglenoidina</i>	356	22
			<i>Euglenoidea</i>	180	59
<i>Euglenineae</i>	544	52	<i>Euglenoida</i>	85	21
			euglenoids	4560	1080
			euglenid	794	229
TOTAL	14284	4442	TOTAL	9995	2783

Additionally, most databases focused in marine or algal biology recognise the ICN as the valid treatment for the species. This means that when a name was previously preoccupied in botanical nomenclature, the new name is considered valid (Table 2). Finally, the major works use botanical nomenclature. In a quick search, we have not found major systematic treatments for euglenas using the ICZN (*cf.* Wołowski & Hindák, 2005; Preisig, 1999; Patterson & Larsen, 1991).

Table 2 Major webpages and the nomenclature used. All searches were made the last day of 2015.

Pages using botanical nomenclature	Pages using zoological nomenclature
Algaebase	WoRMS
Index Nominum Algarum	
Wikipedia	
IRMNG Data Access	Tree of Life
The Euglenoid Project	

CONCLUSION

Considering the stated above, we believe the ICN should be used when working with euglenas' nomenclature and taxonomy, as is the current trend in euglenid biology. Stability could be attained with conservation proposals and the diffusion of the correct names under the ICN in all pertinent web pages and databases.

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