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The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.

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NEW AND LITTLE KNOWN GENERA OF COLOURLESS FLAGELLATES OF FAM. ASTASIACEAE, EUGLENOPHYCEAE RECORDED IN 1954—1968 FROM N. E. CHINA AND BRASIL

WITH ONE PLATE

NOVAE ET MINUS COGNITAE GENERIS FLAGELLATARUM
ECOLORATUM DE FAM. *ASTASIACEAE*, *EUGLENOPHYCEAE*
CHINAE NEC NON BRASILIA ANNO 1954-1968 DESCRIPTARUM
ET ILLUSTRATO PER TABULA I.

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ABSTRACT

The author gives the figures and the descriptions of 28 new and little known genera of flagellata of fam. *Astasiaceae* from which 7 have been described in 1957 and 1960 from N. E. China and 20 genera have been recorded from Brasil and proposed as new to science. Genus *Flagellamonas* gen. nov. found in N. E. China is also described in the present paper. Two genera of flagellata—genus *Baikowia* and genus *Zimmermanniella* have been found in Brasil and in China.

PREFACE

The present paper is a result of a work made by the author during many years in N. E. China and in Brasil and not yet published. In Harbin the material for studies was collected in swamps, pools rich in organical matter and in lakes along Sungari river. All material was studied fresh. From 1963 collecting work was began around Sao Paulo, Brasil, in mountain bogs and mountain lakes

drico-ovatae cum tres carinis spiraliter instructo; marginis carini rotundatis flagellis 2 fere cellulae longius, natantes; cytoplasmate cum granulis paramylaceis ovalibus numerosis; nucleus centralis; vacuola contractilis apice non vidi. Species I. Typus generi *Spira brasiliana* gen. et sp. nov. Tab. I. fig. 18. Cellula 20–25micr. lg., veterum ut in genere. Hab. in stagnis montanis, Parque do Estado do Sao Paulo, Brasil, lg. B. Skvortzov, 20. 7. 65.

18. Genus *Lackeymonas* gen. nov.

Monadae solitarie, libere natantes, metabolicae, obovatae in sectione non applanatae, anteriore parte truncato rotundato pleurumque cum depressione tenui in gula profunda, obliqua et angusta extendente praedita, posteriori modice attenuata et rotundata; flagellis 2, natantes apice aequilongis; periplasto firmo, tenuissimo, spiraliter striata, striis dextro-sinister; cytoplasmate hyalina et granulata sine vacuolis ad nutrimentum; vacuola contractilis parte anteriori cellulae; granulis aramylaceis numerosis; nucleus centralis; movet porro. Differt a genere *Boranovia* Skv. 1957 in flagellis aequilongis, a genera *Milaneziamonas* gen. nov. in cellulis metabolicis, a genere *Ampullamonas* Skv. 1957 in cellulis non applanatis. Dedicavi hanc generis in honorem Dom. Prof. Dr. J. B. (Florida Univ., Florida, USA.) Lackey, protistologo celebraato americano, Species I. Typus generi *Lackeymonas brasiliana* gen. et sp. nov. Tab. I, fig. 22. Cellula 22. 5x 13micr., ceterum ut in genere. Hab. in stagnis, Parque do Estado do Sao Paulo, Brasil, lg. B. Skvortzov, 6. 6. 63.

19. Genus *Teixeiramonas* gen. nov.

Monadae solitariae, libere natantes, metabolcae et non applanatae cum flagellis duas apicalis et natantes, ovatae vel subcylindricae; granulis paramylaceis numerosis ovalibus; vacuola contractilis apice et postice; nucleus infra medianus. Dedicavi hanc genere in honorem Dom. Dr. Alcides R. Teixeira, micologo, Sao Paulo, Species I. Typus generi *Teixeiramonas vacuolaria* gen. et sp. nov. Tab. I, fig. 23. Cellula 15–22 micr. lg., ceterum ut in genere. Hab. in stagnis, montanis, Parque do Estado do Sao Paulo, Brasil, lg. B. Skvortzov 17. 6. 67.

20. Genus *Lowymonas* gen. nov.

Monadae solitariae, libere natantes, metabolicae et non applanatae cum flagellis 2 apicali et natantes, subovalis, oblongae vel fusiformis; periplasto hyalino vel striato; granulis paramylaceis numerosis et magnis; vacuolis ad nutrimentum adsunt; nucleus fere centralis; vacuolis contractilis apice vel nullo. Differt de genere *Filalgonomonas* gen. nov. in flagellis similaribus. Dedicavi hanc genere in honorem Dom. Prof. B. Lowy, Louisiana St. Univ., Lusiana. USA.

Species 4. Typus generi *Lowymonas metabolica* gen. et sp. nov. Tab. I. fig. 24. Cellula 26x 15micr., ceterum ut in genere. Hab. in litori lacu Eldorado prope Sao Pao, Brasil, lg B. Skvortzov, 14. 5. 65.

21. Genus *Milaneziamonas* gen. nov.

Monadae solitariae, libere natantes, non metabolicae et non applanatae, obovatae, late vel brevi fusiformis; flagellis 2 aequilangis, natantes in apice insertis; periplasto firmo vel spiraliter striatae; periplasto firmo, luteola vel spiraliter striatae; cytiolasmate granulata cum granulis paramylaceis numerosis; vacuolis noncontractilis indistinctis vel triquetris; nucleus centralis; vacuolis ed nutrimentum adsunt vel nullo, Differt a genere *Sphenomonas* Stein in flagellis aequilongis, a genere *Mereschkowskiella* Skv. 1957 in cellulis asymmetricis et flagellis apice insertis. Dedico hanc generis Prof. Dr. Adauto Ivo Milanez, biologista, Sao Paulo, Brasil. Species 2. Typus generi *Milaneziamonas glabra* gen. et sp. nov. Tab. I, fig. 20. Cellula 37micr lg., vacuola contractilis triquetris, ceterum ut in genere. Hab. Sao Paulo, Brasil: I. inter *Salvinia auriculata* in valle fl. Pinheiros, lg Prof. C. Lima et B. Skvortzov 15. 6. 63, 2. in lacum montanis, Horto Florestal, lg. Prof. Daniel M. Vital et B. Skvortzov, 27. 6. 63.

22. Genus *Flagellamonas* gen. nov.

Monadae solitariae, libere natantes, firma et non metabolicae, elongato-obovatae vel fusiforme, parte anteriore latiorae, cum apicibus late rotundatis, in sectione non depressae; flagellis 2 similes, natantes, apice cellulae incertis; periplasto firma et hyaline; cytioplasmate granulata; vacuolis contractilis apice minor vel indistinctis; nucleus centralis conspicuus; granulis paramylaceis mimor et indistinctis; nutrimentum saprophyticum; motic porre. Differt a genere *Mereschkowckiella* gen. nov. in flagellis apicalis et granulis paramylaceis indistinctis, in genere *Milaneziamonas* gen. nov. in cellulis firmis et non metabolicis, granulis paramylaceis indistinctis et periplaste hyalino. Species I. Typus generi *Flagellamonas stagnalis* gen. et sp. nov. Tab. I, fig. 21. Cellula 25x 14micr., ceterum ut in genere. Hab. in aqua dulcis, stagnalis prope oppidum Harbin, China.

23. Genus *Baranovia* Skv. 1957.

Baranovia stagnalis Skvortzov, 1957 in Phil. Jour. of Sc. Vol. 86, 174, pl. 5, fig. II. Monadae solitarie, libere natantes, metabolicae, elongato-ovatae, pyriformis, rectae vel curvatae, anteriore multo protracto et rotundato, posteriore parte late rotundata; flagellis 2 dissimilaribus, principale natantes cellulae longius, secundare vel trachendi 1.5 cellulae longius; periplasto firmo hyalino non striato et metabolica; cytioplasmate granulata; vacuola contractilis apece adest vel abest;