

On New Colourless Flagellata Genus Hüber-Pestalozziamonas  
gen. nov. Fam. Peranemaceae, Euglenophyta

by

B. V. SKVORTZOV\*

**Description of genus**

Monada single, free swimming, not metabolic and in section not depressed, without a longitudinal furrow, fusiform in shape; anterior part elongate and rounded, truncate or oblique, nose-shaped with one swimming flagellum. Periplasto hyaline, not metabolic. Nucleus central or posterior or lateral and some time very large. Gullet is present, round or saccate or sometimes indistinct. Cytoplasm granulate with few paramylum granules. Motion rapid forward and rotate. Differs from genus *Petalomonas* Stein in not depressed cells, from genus *Scytomonas* Stein in fusiform shape and apical gullet. Named in memory of Dr. Phil. and Med. G. Hüber-Pestalozzi, Zurich the author of the largest revision of phytoplankton printed in 1955, Stuttgart, Germany.

Twelve species and type of genus Hüber-Pestalozzimonas represented.

Hab. in freshwater reach in organical matter associated with *Petalomonas*, *Peranema*, *Urocolus*, *Euglena*. Distr. Europe (Sweden), Eastern Asia, China, Brasil, South America.

Key of species

1. Nucleus large central ..... 2
1. Nucleus not large ..... 4
2. Cells ends acute ..... 1. *H. P. repentes*
2. Cells ends obtuse ..... 3
3. Cell fusiform or lanceolate, very broad ..... 2. *H. P. subnasuta*

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\* Instituto de Botanica, Caixa Postal 4005 - São Paulo, Brasil

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| 3. Cell fusiform, narrow, asymmetrical or symmetrical      | 3. <i>H. P. obliqua</i>       |
| 4. Anterior end of the cell abrupt and straight or oblique | 5                             |
| 4. Anterior end of the cell rounded                        | 6                             |
| 5. Anterior end abrupt                                     | 9                             |
| 5. Anterior end oblique                                    | 10                            |
| 6. Cell long ovoid   | 4. <i>H. P. simplicia</i>     |
| 6. Cell fusiform   | 7                             |
| 7. Cell linear fusiform                                    | 5. <i>H. P. probescidea</i>   |
| 7. Cell fusiform and oblique                               | 6. <i>H. P. menoidiodes</i>   |
| 7. Cell fusiform and symmetrical                           | 8                             |
| 8. Cell narrow fusiform                                    | 7. <i>H. P. aquae impurae</i> |
| 8. Cell broad fusiform                                     | 8. <i>H. P. laterale</i>      |
| 9. Cell short fusiform                                     | 9. <i>H. P. pusilla</i>       |
| 9. Cell loner, fusiform                                    | 10. <i>H. P. minuta</i>       |
| 10. Cell broad fusiform                                    | 11. <i>H. P. spinosa</i>      |
| 10. Cell narrow fusiform                                   | 12. <i>H. P. planctonica</i>  |

### Description of species

1. *H.-P. repentes* nov. nom. Plate 1, fig. 1.

*Petalomonas repentes* Skvortzov 1957 in Phil. Jour. of Sci. 178, Pl. 4, fig. 38.

*Maonda fusiformis* cum apicibus acutis, non applanatis,  $18 \times 7$  micr. Flagellum 1 natantes  $2/3$  cellulae longius. Periplasto firmo, livi, non metabolicae. Vacuolis contractiles 3 in parte anteriore cellulae et 2 posteriore. Nucleus magnus et medianus. Movet repente et porro. Hab. In stagnis prope oppidum Harbin, Manchuria borealis, China.

2. *H.-P. subnasuta* sp. nov. Plate 1, fig. 3.

Monada fusiformis non applanata, parte anterior attenuata, distincte obliqua vel uno latere nasuta, parte posteriore attenuata et plus minus obtusa,  $15-18.5 \times 5-6-7.4$  micr. Flagellum unicum natantes, cellulae aequilongae vel paulo longiora. Periplasto levi, firmo. Vacuola contractilis parte anteriore distincta vel indistincta. Granulis paramylonis parte anterior et posteriore, nucleo magne et centralis. Hab. Brasil: 1. In aqua stagnalis inter *Salvinia*

auriculata prope São Paulo, prope Elderado lacu. lg. 6. 5. 65 B. Skvortzov et Daniel Vital. 2. São Paulo, in lacu prope Parque do Estado, lg. B. Skvortzov, 11. 1. 63. 3. São Paulo, in lacu prope Pinheiros riv., lg. C. Lima et B. Skvortzov, 20. 6. 63.

3. *H.-P. obliqua* sp. nov. Plate 1, fig. 2 and 4.

Monada angusto-fusiformis curvata vel recta, non applanata et non metabolica, 15-18.5 × 5-9 micr., parte anteriore attenuata cum flagellum natantes fere cellulae longiora; periplasto levi et firma. Cytoplasmate minute granulata. Vacuolis contractilis apice. Nucleo magno infra medium cellulae sito. Hab. Brasil, São Paulo: 1) in stagnis, Parque do Estado, lg. B. Skvortzov, 1.3.63. 2) in lacu prope fl. Piheires, lg. B. Skvortzov, 10.4.63.

4. *H.-P. simplicia* sp. nov. Plate 1, fig. 12.

Cellula fusiformis vel elongato ovalis, 10 × 3 micr. parte anteriore attenuati, obtuse, parte posteriore plus minus rotundatis. Flagellum I natantes cellulae longiora. Periplasto levi et firmo. Vacuolis contractilis parte anteriore. Nucleus posterior et lateralis. Granulae olei et leucosini non vidi. Hab. Brasil: São Paulo, in stagnis, Parque do Estado, lg. B. Skvortzov, 25. 1. 65.

5. *H.-P. probescidae* sp. nov. Plate 1, fig. 8.

Monada anguste fusiformis, 22 × 5 micr., non applanata, apicibus attenuatis, parte anteriori deflexa, proboscidea vel rostellato. Flagellum natantes fere cellulae longiora. Cellula parte posteriore atteuata et obtusa. Periplasto levi et firmo. Cytoplasmate minute granulata. Vacuolis contractilis parte anteriore et nucleus medianus. Hab. Asia orientalis, China, in stagnis prope oppidum Habbin, Manchuria, China.

6. *H.-P. menoidioides* sp. nov. Plate 1. fig. 5.

Monada fusiformis firma, non applanata, asymmetrica, parte anteriore plus minus rotundata, lateribus parallelis, apice curvatus et acutis, 18 × 4-5 micr. Flagellum singulum natantes in apice insertum, longitudini corpori simili. Periplasto non metabolicae, levi, nucleo supra medianus et magno. Cytoplasmate cum granulatis paramylaceis parvis nonnullis, ovalibus vel bacillaribus in parte anteriori et posteriori corporis. Vacuola contractilis parte anteriori. Hab. Brasil: São Paulo, inter *Salvinia auriculata* in lacu prope

Fl. Pinheiros. lg. C. Lima et B. Skvortzov, 18. 6. 63.

7. *H.-P. aquae-impurae* sp. nov. Plate 1, fig. 13.

Monada angusto fusiformis cum polis attenuatis, non applanatis,  $25.9 \times 4$  micr., parte anteriore abrupte et obtusa, parte posteriore subacuta et obtusa. Flagellum 1 natantes  $2/3$  cellulae longius. Gula vel vacuola contractilis antice. Nucleus in parte posterior; Cytoplasma granulata cum guttae olei. Periplaste hyaline et firmo. Hab. Brasil: São Paulo, in plancton lacu artificialis Belling, lg. Adauto Milanez. 24. 4. 63.

8. *H.-P. laterale* sp. nov. Plate 1, fig. 6.

Monada fusiformis non applanata, apicibus attenuatis et acutis et obtusis,  $17-18 \times 5$  micr. Flagellum natantes cellulae longiera. Periplasto levi et firma. Cytoplasmate minutae granulata cum vacuolis contractilis supra media. Nucleo infra mediana cellulae sito. Hab. Brasil: São Paulo, in aqua impura prope Eldorado, lg. Daniel Vital et B. Skvortzov, 6. 5. 65.

9. *H.-P. pusilla* (Skuja) nov. Plate 1, fig. 7.

=*Petalomonas pusilla* Skuja in Hüber-Pestalozzi, 1955, p. 488-489. Taf, XCVIII, fig. 983.

Monada ellipsoidea vel saculliforma, in sectione paulo depressa, apicibus abruptis,  $5-12 \times 2-4$  micr, in sectione  $1.5-2.5$  micr. Flagellum fere cellulae longiora vel  $1/2$  cellulae longiera. Periplasto levi et firmo. Cytoplasmate granulata. Vacuola contractila pone, nucleo nucleoto mediamo. Motio repente Hab. Swecia in lacu.

10. *H.-P. minuta* sp. nov. Plate 1, fig. 11.

Monada anguste-fusifermis et non applanata cum apicibus minute attenuatis et obtusis,  $15 \times 4$  micr. Flagellum natantes paulo cellulae longiore. Periplasto levi et firmo. Cytoplasmate minute granulata. Vacuola contractilis pone et distincta. Nucleus indistinctus. Hab. Aia orientalis, China: in stagis prope oppidum Harbin.

11. *H.-P. spinosa* sp. nov. Plate 1, fig. 9.

Monada fusiformis et non applanata, paulo oblique abrupta, parte posterior longa spinosa. Flagellum natantes apice fere cellulae longiora. Periplasto levi et firmo. Vacuola contractilis, apice et nucleo centralis. Cyto-

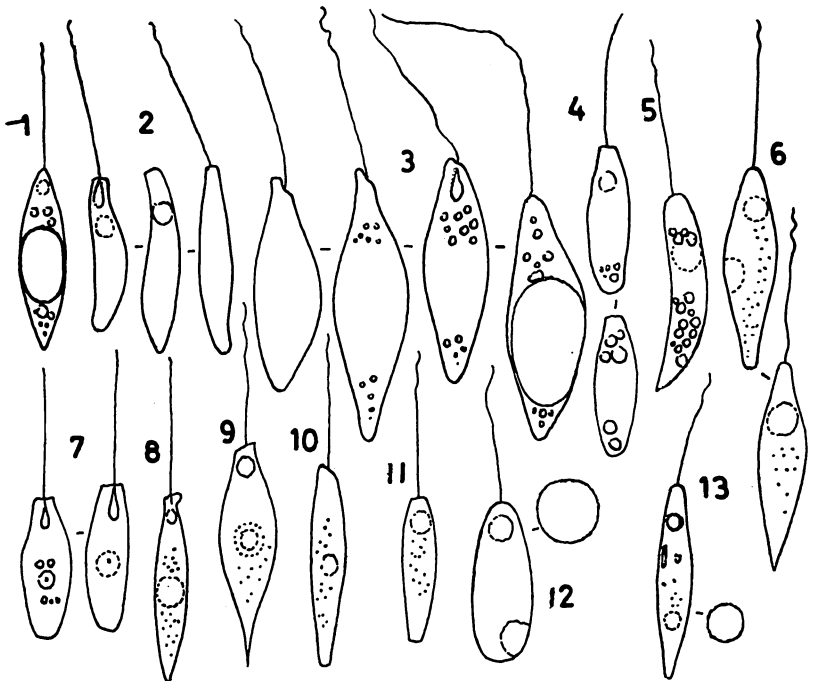
plasmate minute granulata. Hab. Asia orientalis, China: in stagnis prope oppidum Harbin, Manchuria, China.

12. *H.-P. planctonia* sp. nov. Plate 1, fig. 10.

Monada anguste fusiformis et non applanata cum apicibus attenuatis et obtusis,  $20 \times 5$  micr. Flagellum natantes fere cellulae longiora. Periplasto levi et firmo. Cytoplasmate minute granulata. Vacuola contractilis non vidi. Nucleo centralis, Hab. Asia orientalis, China, in stagnis prope oppidum Harbin.

摘 要

ヨーロッパ、東亞および南米ブラジル、サンパウロで採集したミドリムシ植物 Peranemaceae の新属 *Hüber-Pestalozziamonas* 12新種について記載した。属の記載、種への検索表と各種の記載図をつけてある。(野田光蔵)



## Illustrations

## PLATE I

- Fig. 1. *Hüber-Pestalloziamonas repentes* nov. nom.  
 Fig. 2, 4. *Hüber-Pestalloziamonas obliqua* sp. nov.  
 Fig. 3. *Hüber-Pestalloziamonas subnasuta* sp. nov.  
 Fig. 5. *Hüber-Pestalloziamonas menoidioides* sp. nov.  
 Fig. 6. *Hüber-Pestalloziamonas laterale* sp. nov.  
 Fig. 7. *Hüber-Pestalloziamonas pusilla* (Skuja) nov.  
 Fig. 8. *Hüber-Pestalloziamonas probescidea* sp. nov.  
 Fig. 9. *Hüber-Pestalloziamonas spinosa* sp. nov.  
 Fig. 10. *Hüber-Pestalloziamonas planctonica* sp. nov.  
 Fig. 11. *Hüber-Pestalloziamonas minuta* sp. nov.  
 Fig. 12. *Hüber-Pestalloziamonas simplicia* sp. nov.  
 Fig. 13. *Hüber-Pestalloziamonas aquae-impurae* sp. nov.