

COMMUNICATIONS

**MONOGRAMMA GRAMINEA (PTERIDACEAE):
NAME TYPIFICATION AND SPORE MORPHOLOGY**

© 2021 I. I. Gureyeva^{a,d,#}, I. V. Sokolova^{b,##}, A. V. Vaganov^{c,e,###},
A. A. Kuznetsov^a, and R. S. Romanets^a

^a Tomsk State University

Lenina Ave., 36, Tomsk, 634050, Russia

^b V.L. Komarov Botanical Institute RAS

Prof. Popov Str., 2, St. Petersburg, 197376, Russia

^c South-Siberian Botanical Garden, Altai State University

Lenina Ave., 61, Barnaul, 656049, Russia

^d Tomsk Oil and Gas Design and Research Institute

Mira Ave., 72, Tomsk, 634027, Russia

^e Sakhalin Branch of the Botanical Garden-Institute of FEB RAS

Gorkogo Str., 25, Yuzhno-Sakhalinsk, Sakhalin Region, 693023, Russia

e-mail: gureyeva@yandex.ru

e-mail: isokolova@binran.ru

e-mail: vaganov_vav@mail.ru

Herbarium specimens of *Monogramma graminea* (Poir) Schkuhr (Vittarioideae, Pteridaceae) from the collection of the Herbarium LE (V.L. Komarov Botanical Institute of RAS, Saint-Petersburg) and digital images of the herbarium specimens of *M. graminea* from the Herbaria P (Muséum National d'Histoire Naturelle, Paris) and BM (Natural History Museum, London) were analyzed. The collections contain six specimens collected by Ph. Commerson on Ile-de-France Island and representing the original material of *Pteris graminea* – the basionym of *Monogramma graminea*. The lectotype of *Pteris graminea* is designated here by I.I. Gureyeva, I.V. Sokolova, and A.V. Vaganov: “Ile de France. Herb. Commerson” (P: P00674761). Four more specimens were identified as syntypes: P01344296; P01344312, left lower plant; P01420498 (all from P); BM000605316 (BM); LE00050576, upper plant (LE). The spores of the *M. graminea* specimen stored in LE were studied using scanning electron microscopy (SEM). The spores are trilete, tetrahedral. In equatorial position, the distal side of the spores is hemispherical, proximal one is conical; in proximal-polar and distal-polar positions, the spores are rounded-triangular, the surface of the spores between the laesura arms is slightly depressed. The equatorial diameter is 34.5 (32.2–35.7) µm, the polar axis is 33.0 (32.4–33.7) µm, the laesura arms are prominent, straight, 19.3 (18.8–20.1) µm long, 1.2 (1.0–1.5) µm wide. The exospore without sculpture, its surface is plain, smooth or slightly granulate. Perispore abraded, remaining on the spore surface as the small fragments. *M. graminea* is similar in spore characteristics to four *Haplopteris* species: *H. guineensis* (Desv.) E.H. Crane, *H. humblotii* (Hieron.) S. Linds. et C.W. Chen, *H. schliebenii* (Reimers) Schuettp. and *H. volkensii* (Hieron.) E.H. Crane, which, like *Monogramma graminea*, have an African-Indian Ocean range, and differ from Asian-Pacific species of *Haplopteris* with bilateral spores, including *H. dareicarpa* (Hook.) S. Linds. et C.W. Chen, recently transferred in this genus from *Monogramma*.

Keywords: *Monogramma*, Vittarioideae, Pteridaceae, type specimens, lectotypification, syntypes, spore morphology, scanning electron microscopy (SEM)

DOI: 10.31857/S0006813621020046

ACKNOWLEDGEMENTS

The authors are grateful to the curator of the Herbarium of the V.L. Komarov Botanical Institute of RAS Prof. Vladimir I. Dorofeyev for the opportunity to work with collections. We thank Dr Dmitriy A. German (Altai State University) for valuable comments made in preparing this article. For the translation of the text by Ch. Schkuhr from German, we thank Margarita Albrecht.

The study was carried out within the framework of the state assignments of the Ministry of Science and Higher Education of the Russian Federation: I.I. Gureyeva (Tomsk State University) – project No. 0721-2020-0019; I.V. Sokolova (V.L. Komarov Botanical Institute RAS) – project No. AAAA-A18-118022090078-2; A.V. Vaganov (Altai State University) – project No. FZMW-2020-0003.