

A New Species from Genus *Plocama* L. (Rubiaceae Juss.) from Middle Asia

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Abstract: A new species from genus *Plocama* growing in Uzbekistan and Tadzhikistan is described. Morphological characters within section *Bucharia* are discussed.

Zusammenfassung: Eine neue *Plocama*-Art aus Usbekistan und Tadschikistan wird beschrieben. Morphologische Merkmale innerhalb der Sektion *Bucharia* werden diskutiert.

Key words: Taxonomy, *Plocama*, endemism, hotspot, Uzbekistan.

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Introduction

Southern Pamir-Alaj can be characterized by a large area of gypsaceous foothills with specific floristic elements of Old Mediterranean flora. Here are still growing several relic plants such as *Otostegia* BENTH. (*O. bucharica* B. FEDTSCH.), *Spirostegia* IVANINA (*S. bucharica* (B. FEDTSCH.) IVANINA, *Zygophyllum* L. (*Z. bucharicum* B. FEDTSCH.), *Calispepla* VVED. (*C. aegacanthoides* VVED.), and *Plocama* AITON. The last one was seriously enlarged by M. BACKLUND, B. BREMER & M. THULIN (2007). Due to molecular data several genera (*Gaillonia* A. RICH. ex DC., *Neogaillonia* LINCZ., *Jaubertia* GUILL., *Crocylis* E. MEY. ex HOOK. f. in BENTH. & HOOK. f., *Choulettia* POMEL., *Aitchisonia* HEMSL., *Pterogaillonia* LINCZ., *Pseudogaillonia* LINCZ., *Putoria* PERS.) belongs to the large genus *Plocama*, where section *Bucharia* is presented by five species growing on the large area of southern Middle Asia.

Results and Discussion

Revision of Middle Asiatic species of *Plocama* (= *Neogaillonia*) was firstly made by M. PACHOMOVA (1987) where she recognized 9 species growing in low mountainous zone of Pamir-Alaj and Kopehdagh. Erroneously she enclosed recently described *Neogaillonia mestscherjakovii* LINCZ. Putting to synonyms to *N. bucharica* B. FEDTSCH. & DESJAT. Senior author 20 years ago was able to study *N. mestscherjakovii* in its classical location as well as type specimen (Fig. 1) stored in TASH (Turk-

menistan, Khodzhaifljata, gypsaceous slopes, 5-6 June 1976, A. Mestscherjakov). This species clearly differs from *N. bucharica* by hairy flowers, as well as small hairy peduncles. F. EHRENDORFER & E. SCHONBECK-TEMESY (2005) made excellent revision of *Gaillonia* for a large area of Flora Iranica. They accepted new taxon and made new combination - *G. mestscherjakovii* (LINCZ.) EHREND. During collecting mission together with Dr. Al-Shehbaz in 2012 a new species of *Plocama* was collected in the surroundings of Bajssun town (Fig. 2). These plants were naked (exclude limb margins of the tepals). Critical studies of herbarium in TASH revealed that this new species occupies a large area of gypsaceous slopes of Hissar mountains spreading to Babatag range in Tadzhikistan. Perianth is 25-30 mm long, slightly rosy and having several papillae on the margins of the limbs. Ovary is naked as well as brownish mericarps. Inflorescence is monochasial, whereas *N. bucharica* has dichasial terminal inflorescence branches.

Material studied

TASH - S-W Pamir-Alaj, Chulbair range, foothills, 2.5-4 km western village Ojbaryk, red sands, № 174, 07 June 1940, A. Archiereev; Southern Uzbekistan, Chulbair range, foothills, river Tentaksaj, stream Garmaly, nearby spring Khodzhaipak, red sands and clays, № 401, 26 May 1977, V. Botschantev; Bajssun expedition, southern village Bassun, gypsaceous slope, h=1105 m.s.l., № 311, 10 August 1940, L. Popova; S-W from Kofrun, on gypsaceous foothills, № 214, 13 August 1940, L. Popova, Vassilkovskaja; Pamir-Alaj, pestrotzety in between Bajssun and Shurchi, № 383, 14 May 1989, R. Kamelin, F. Khassanov; Northern red slopes of Bjurutakht mountain, № 632, 04 June 1941,



Fig. 1:
Isotype of *Plocama*
mestscherjakovii
(TASH).

Popova; Bajssun, red slopes western, 04 June 1930, Lepeshkin; Bukhara, Bajssun, red slopes, 06 June 1897, Lipsky; Denau, Babatag mnts., between villages Suljum and Chinaratakhta, № 367, 28 June 1914, Popov; S-W Pamir-Alaj, Chulbair mnts., red foothills 2/5-4 km western village Oibaryk, № 174, 07 June 1940, Arhireev; S-W Pamir-Alaj, Babatag mnts., red slopes between villages Petabazar and Duob, № 409, 04 July 1936, Lepeshkin & Mukhamedzhanov.

Ab *P. bucharica* (B. FEDTSCH. et DESJAT.) M. BACKLUND et THULIN floribus roseis (nec albidi-cinereis), inflorescentia spinulentibus (nec semiumbellatis), ovariis et foliis glabris (nec capillaribus) differt. Ab *P. mestscherjakovii* (LINCZ.) M. BACKLUND & THULIN floribus roseis (nec albidi-cinereis), glabris et majoribus, foliis duplo longioribus, stipulae nulla differt.

T y p u s : Uzbekistan. Kelif-Sherabad range; 25 km eastern town Bajssun, grey clays; N 38 04 50 89, E 67 26 26 77; 15 June 2013; F. O. Khassanov et al. (Type: TASH, isotype MBG).

Species in honorem Dr. Ihsan Al-Shehbaz Missouriensis denominata est.

***Plocama alshehbazii* F.O. KHASS., D. KHAMR., U. KHUZH. et ACHILOVA sp. nov. (section Bucharica (LINCZ.) F.O. KHASS. comb. nov. (= *Neogaillonia* sect. Bucharica LINCZ., Novosti Sist. Vyssh. Rast. 10: 230. 1973).**

Semishrub 20-45 cm high. Roots are blackish-brownish. Stems are glabrous, greenish or dark greenish. Leaves are glabrous, 2-4 cm long, 1-1.5 mm wide, opposite, fused, without stipules. Inflorescence monochasial, flowers without peduncles. Bracts are greenish, glabrous, 5-6 mm long, 1 mm wide. Calyx blackish, 2.5-3 mm long, with 5 unequal ciliated teeth on the top 0.5 mm long. Perianth 25-30 mm long, initially yellowish, later pinkish, glabrous with 5 blades 3-3.5 mm long ciliated on the top. Stamens 5, exposed together with 2-lobed stigma. Ovaries glabrous. Mericarps glabrous, brownish, 4-5 mm long, 1.5 mm wide.



Fig. 2: Flowering *Plocama alshehbazii* sp. nov.

Key for determination of section *Bucharica* (including *Surkhanica* EHREND.) species

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| 1 | Flowers small 8-10 mm long, stamens short, inside the perianth tube | 2 |
| 1* | Flowers large 15-30 mm long, stamens exposed | 3 |
| 2 | Flowers sessile | <i>P. botschantzevii</i> (LINCZ.) M. BACKLUND et THULIN |
| 2* | Flowers with peduncles 3-5 cm long | <i>P. innopinata</i> (LINCZ.) M. BACKLUND et THULIN |
| 3 | Plants hairy | <i>P. trichophylla</i> (POPOV ex TSCHERNEVA) M. BACKLUND et THULIN |
| 3* | Plants naked | 4 |
| 4 | Inflorescens monochasial | <i>Plocama alshehbazii</i> sp. nov. |
| 4* | Inflorescens dichasial with terminal branches | 5 |
| 5 | Stipules presented, bracts 10-15 mm long, twice shorter than mericarps | <i>P. mestscherjakovii</i> (LINCZ.) M. BACKLUND et THULIN |
| 5* | Stipules absent, bracts 5-7 mm long, equal with mericarps | <i>P. bucharica</i> (B. FEDTSCH. & DESJAT.) M. BACKLUND et THULIN |

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