

NEW TAXA AND LECTOTYPIFICATIONS OF *PEDICULARIS* (OROBANCHACEAE) REQUIRED FOR THE *FLORA OF PAKISTAN*

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The new taxa *Pedicularis* L. series *Bicornutae* R.R.Mill, *Pedicularis* series *Rhynchotrichae* R.R.Mill, *Pedicularis bicornuta* Klotzsch var. *adenocalyx* R.R.Mill, *Pedicularis murreeana* R.R.Mill & R.Bone and *Pedicularis staintonii* R.R.Mill (Orobanchaceae) are described. *Pedicularis* series *Klotzschianae* R.R.Mill is proposed as a replacement name for the illegitimate *Pedicularis* [unranked] *Macranthae* that has often been treated as ‘series *Macranthae* Prain’. The new combination *Pedicularis bipinnatifida* (Pennell) R.R.Mill is made and four names are lectotypified. An epitype is designated for *Pedicularis bicornuta*.

Keywords. Epitype, lectotypes, new combination, new series, new species, new variety, Pakistan, *Pedicularis*.

INTRODUCTION

Taxonomic revisions of *Pedicularis* L. series *Tenuirostres* Maxim. and *Pedicularis* series *Megalanthae* (Prain) Bonati (Orobanchaceae), plus two new series that have been segregated from them, have been prepared and will be published in *Edinburgh Journal of Botany* 68(1). However, names for these two new series, and a number of other previously unpublished names and lectotypifications in the genus, are more urgently required for the *Flora of Pakistan* project. These novelties are published here in a brief form and with no further comment but will be fully described and discussed in the forthcoming revisions.

NEW TAXA AND OTHER NOVELTIES

1. *Pedicularis* L. [sect. *Phanerantha* H.L.Li] series ***Bicornutae*** R.R.Mill, **ser. nov.**

Differt a *Pedicularis* ser. *Megalanthis* (Prain) Bonati tubo corollae crassiore, labello haud saccato nec ringenti lobo mediano pendenti eis lateralibus modo alieno rotatis (altero summum altero laterem floris tegenti) galea aut in labello occulta (*Pedicularis bicornuta*) aut proboscidea haud occulta (*P. elephantoides*) galeae parte inferiore distincta (haud perreducta vel nulla) basin versus arcte helice torta parte antherigera resupinata in rostrum longum vel longissimum decurvum

vel sursum sinuosum sigmoideum ut proboscidem producta profunde bifidum lobulis aut ut cornus ad apices patentibus aut subparallelibus producta, filamentis omnibus glabris. Folia caulina praesentia, alterna pluria, omnia petiolata vel superioribus sessilibus. Inflorescentia longe racemosa densa usque laxe centrifugalis. Calyx tubulosus usque inflatus, ad apicem paulo angustatus vel leviter constrictus. Corolla omnino lutea vel rostro galeae purpureo tincta. – Type: *Pedicularis bicornuta* Klotzsch.

2. *Pedicularis* series *Rhynchotrichae* R.R.Mill, ser. nov.

A *Pedicularis* ser. *Tenuirostribus* Maxim. (= [unranked] *Pectinatae* Prain) bracteis deflexis (haud adpressis calyces tegentibus) calycum venis indistinctissime costatis (haud venis atris et clare visis) galeae parte verticali antice longe ciliata et rostro in parte mediano tomentello, labelli lobo mediano leviter emarginato (haud integro) lobis omnibus ciliatis nec glabris, filamentis ad insertionem longe pilosis cetera glaberrimis sed moniliformibus (haud distaliter villosis cetera glaberrimis omnino planis) facile distinguitur. – Type: *Pedicularis rhynchotricha* P.C.Tsoong.

3. *Pedicularis* series *Klotzschianae* R.R.Mill, nom. nov.

Pedicularis [unranked] 7. *Macranthae* Prain, Ann. Roy. Bot. Gard. (Calcutta) 3: 69 (1890), nom. illeg., non *Pedicularis* [unranked] *Macranthae* Bunge in Ledeb., Fl. Ross. 3(2): 301 (1849). – *Pedicularis* ser. *Macranthae* Prain ex Hurus., J. Jap. Bot. 22: 184 (1948), nom. illeg. – Type: *Pedicularis klotzschii* Hurus. [1948; a *nomen novum* for *Pedicularis macrantha* Klotzsch in Klotzsch & Garcke, Bot. Ergebn. Reise Waldemar 108, t. 59 (1862) non Sprengel, Syst. Veg. Cur. Post. 233 (1827)].

4. *Pedicularis bicornuta* Klotzsch in Klotzsch & Garcke, Bot. Ergebn. Reise Waldemar 109, t. 61 (1862). – Lectotype designated here: the illustration of *Pedicularis bicornuta* in Klotzsch & Garcke, op. cit., t. 61 (1862; fig. 1A). – Epitype: Pakistan, Khot An N of Mastuj between Turikho and Mastuj rivers, 11,000 ft, 11 vii 1958, *Stainton* 2854 (epi E, designated here).

5. *Pedicularis bicornuta* Klotzsch var. *adenocalyx* R.R.Mill, var. nov.

A *Pedicularis bicornuta* var. *bicornuta* calycibus glandulis brevibus densis pilis etiam eglandulosis tecta differt. – Type: Pakistan, B-8 Kashmir, Sonamarg, 34°20'N, 75°20'E, 10,500 ft, at edge of stream, flowers yellow, 5 viii 1965, *Stainton* 5031 (holo BM).

Pedicularis eximia G.Watt, J. Linn. Soc., Bot. 18: 381 (1881) p.p. incl. lectotype. – Type: India, Himachal Pradesh, Pangi, Chumba State, Chenab River, southerly aspect, 8500–9000 ft, 25 vii 1878, *J. Ellis snr.* s.n. (hb. *G. Watt* 97 B) (lecto E, designated here).

6. *Pedicularis bipinnatifida* (Pennell) R.R.Mill, comb. et stat. nov. – *Pedicularis pectinata* Wall. ex Benth. subsp. *bipinnatifida* Pennell, Acad. Sci. Nat. Philadelphia Monogr. 5: 134 (1943). – Type: Pakistan, Hazara, Kagan, Sarul, 13 viii 1897, *Inayat* 22051 (holo PH n.v.; iso K).

7. *Pedicularis murreeana* R.R.Mill & R.Bone, sp. nov.

Affinis *Pedicularis pectinatae* Wall. ex Benth. sed labio corollae leniter undulato, calyce curvulo antice fisso, racemo multo laxiore floris oppositis differt; a *P. stewartii* Pennell calyce minus decurvo, labio corollae leniter undulato, galeae rostro brevior, segmentis foliorum multo magis profunde incisisserratis (haud crenatis) recedit. – Type: Pakistan, C-7 Rawalpindi, Changla Jali, Murree Hills, 8000 ft, sunny cliffs, pink and white, viii 1948, R.R. Stewart 23467 (holo K).

8. *Pedicularis staintonii* R.R.Mill, sp. nov.

A *Pedicularis pectinata* Wall. ex Benth. foliis basalibus et caulinis angustioribus pinnatipartitis (non pinnatisectis) caulinis semper 4-natis, inflorescentia laxissima floribus 4-natis (non 3-natis), bracteis medianis et superioribus oblong-ellipticis obtusis vel subacutis (non ovatis vel orbiculari-ovatis breviter acuminatis), calyce campanulato paulo curvato (haud ovoideo recto) haud inflato brevior (7–9 mm non 10–12 mm), seminum testa sine jugis longitudinalibus sed reticuli luminibus maximis haud parvis late ellipticis vel suborbicularibus (haud elliptico-quadrangularibus) differt. – Type: Pakistan, Chitral, Chumarkhan Pass E of Mastuj, on open slopes, 12,000 ft, corolla pink, 15 vii 1958, J.D.A. Stainton 2897 (holo E; iso RAW, BM [excluding one detached inflorescence of *Pedicularis pyramidata* also mounted on the sheet]).

9. *Pedicularis pectinata* Wall. ex Benth., Scroph. Ind. 52 (1835). – Type: [India, Himachal Pradesh] Choor, Royle (lecto K, designated here).**10. *Pedicularis pectinata* subsp. *palans* (Prain) Pennell, Acad. Nat. Sci. Philadelphia Monogr. 5: 133 (1943). – *Pedicularis pectinata* var. *palans* Prain, J. Asiat. Soc. Bengal 58(2,3): 255 (1889); Prain, Ann. Roy. Bot. Gard. (Calcutta) 3: 130 (1890). – Type: [Kashmir] Kishtwar, 11,000 ft, 20 vi 1848, J.D. Hooker & T. Thomson (lecto K, designated here).**

Received 16 December 2009; accepted for publication 14 January 2010