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New names of fossil plant species, assigned to extant genera, from the Tertiary sediments of India and Nepal

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ABSTRACT

Saxena R.K., Doweld A.B. & Prasad M. 2026. New names of fossil plant species, assigned to extant genera, from the Tertiary sediments of India and Nepal. Geophytology 56(1): 55–68.

The objective of the present paper is to validate names of twenty-eight species of fossil plants, recorded from the Tertiary sediments of various parts of India and Nepal. Twenty-five of these were not validly published by their proposing authors for not complying with one or more of the following articles of the International Code of Nomenclature for algae, fungi, and plants (ICNafp), e.g. Art. 9.1, 40.2, 40.5, 43.3 (Turland et al. 2025). These species are: *Alpinia siwalica* sp. nov. (*Alpinia siwalica* Mah. Prasad, R. Ghosh & P.P. Tripathi, nom. inval.), *Ardisia siwalika* sp. nov. (*Ardisia siwalika* Mah. Prasad, S.M. Pandey, Ay. Singh, Huk. Singh & S.K. Singh, nom. inval.), *Arytera miolitoralis* sp. nov. (*Arytera* (*Ratonia*) *miolittoralis* Mah. Prasad, S. Gautam, Bhowmik, S. Kumar, S.K. Singh, nom. inval.), *Arytera nepalensis* sp. nov. (*Arytera* (*Ratonia*) *nepalensis* Mah. Prasad, S. Gautam, Bhowmik, S. Kumar, S.K. Singh, nom. inval.), *Canarium siwalicum* sp. nov. (*Canarium siwalicum* Mah. Prasad, Huk. Singh & S.K. Singh, nom. inval.), *Derris prakashii* sp. nov. (*Derris prakashii* Mah. Prasad, R. Ghosh & P.P. Tripathi, nom. inval.), *Entada awasthii* sp. nov. (*Entada palaeoscandens* N. Awasthi & Mah. Prasad, nom. inval. pro parte), *Entada miophaseoloides* sp. nov. (*Entada palaeoscandens* N. Awasthi & Mah. Prasad, nom. inval. pro parte), *Lagerstroemia himachalensis* sp. nov. (*Lagerstroemia himachalensis* Mah. Prasad, Huk. Singh & S.K. Singh, nom. inval.), *Lagerstroemia jamraniensis* sp. nov. (*Lagerstroemia jamraniensis* Mah. Prasad, R. Ghosh & P.P. Tripathi, nom. inval.), *Miliusa miovelutina* sp. nov. (*Miliusa miovelutina* P.P. Tripathi, S.M. Pandey, Mah. Prasad, nom. inval.), *Phoebe himachalensis* sp. nov. (*Phoebe himachalensis* S.M. Pandey, Shashi, G.J. Kushw., Mah. Prasad & Alok, nom. inval.), *Sarcosperma mioarboreum* sp. nov. (*Sarcosperma mioarboreum* Mah. Prasad, R. Ghosh & P.P. Tripathi, nom. inval.), *Scolopia himachalensis* sp. nov. (*Scolopia himachalensis* Mah. Prasad, S.M. Pandey, Ay. Singh, Huk. Singh & S.K. Singh, nom. inval.), *Swietenia palaeomahagoni* sp. nov. (*Swietenia palaeomahagoni* Kaj. Chandra, Anum. Shukla, M. Bansal, Vand. Prasad, nom. inval.), *Syzygium miocenicum* sp. nov. (*Syzygium miocenicum* Mah. Prasad & U. Prakash, nom. inval.) and *Terminalia miopaniculata* sp. nov. (*Terminalia miopaniculata* Mah. Prasad, S.M. Pandey, Shashi, G.J. Kushw. & Alok, nom. inval.). These names are here validated by providing the missing validating information.

Three illegitimate, but validly published, species names (later homonyms) are replaced with new names (nom. nov.). These are: *Atalantia prasadii* nom. nov. (≡ *Atalantia miocenica* Mah. Prasad non *Atalantia miocenica* (Saporta) Rüffle), *Ficus prasadii* nom. nov. (≡ *Ficus nepalensis* Mah. Prasad non *Ficus nepalensis* Spreng. nec *Ficus nepalensis* Blanco – synonym of *Ficus benjamina* L.) and *Ziziphus prasadii* nom. nov. (≡ *Ziziphus miocenica* Mah. Prasad non *Ziziphus miocenica* K.I.M. Chesters). Two more homonymic names, but originally both invalidly published, are validated with new names: *Antidesma prasadii* sp. nov. instead of "*Antidesma miocenica*" Mah. Prasad & H.D. Dwivedi, nom. inval. (from Nepal) and *Antidesma sarkaghatense* sp. nov. against "*Antidesma miocenicum*" S. Tiwari et al., nom. inval. from Himachal Pradesh, India.

New species names proposed due to the revision of original outdated systematic designations: *Ficus eodrupacea* sp. nov. is validated instead of "*Ficus eomysorensis*" P.P. Tripathi, S.M. Pandey & Mah. Prasad, nom. inval., being related to extant *Ficus drupacea* Thunb. (syn. *Ficus mysorensis* Roth), *Pachira kathgodamica* sp. nov. is proposed instead of invalidly published "*Pachira palaeomalabarica*" Mah. Prasad, R. Ghosh & P.P. Tripathi, nom. inval., *Adinobotrys kathgodamensis* sp. nov. is proposed instead of invalidly published "*Millettia kathgodamensis*", nom. inval., *Fissistigma jarwaense* sp. nov. is re-classified against invalidly published "*Melodorum jarwaense*" P.P. Tripathi, S.M. Pandey & Mah. Prasad, nom. inval., *Lepidopetalum miocenicum* sp. nov. is revised instead of invalidly published "*Cupania miocenica*", nom. inval., *Maasia palaeosumatrana* sp. nov. is re-classified against previously invalidly published "*Polyalthia palaeosumatrana*", nom. inval.

Altogether, 25 new species (sp. nov.) and 3 replacement names (nom. nov.) are proposed. New fossil-species names are reported for the first time in extant genera of flowering plants: *Adinobotrys* (*Fabaceae*)*, Lepidopetalum* (*Sapindaceae*)*, Maasia* (*Annonaceae*)*.*

Keywords: Fossil plants, validation of taxa names, Siwalik Group, Miocene-Pliocene, Nepal, India.

INTRODUCTION

A careful surveillance of plant fossils from the Tertiary sediments of India and Nepal revealed that a good number of species were not validly published by their proposing authors because of non-compliance of mandatory requirements for their valid publication as per Art. 9.1, 40.2, 40.5 and 43.3 of the International Code of Nomenclature for algae, fungi and plants (Turland et al. 2025). These are: "*Syzygium miocenicum*" (Prasad & Prakash 1984), "*Entada palaeoscandens*" (Awasthi & Prasad 1990), "*Atalantia miocenica*" (Prasad 1994a), "*Ziziphus miocenica*" (Prasad 1994b), "*Ficus eomysorensis*", "*Melodorum jarwaense*", "*Miliusa miovelutina*" and "*Polyalthia palaeosumatrana*" (Tripathi et al. 2002), "*Alpinia siwalica*", "*Cupania miocenica*", "*Derris prakashii*", "*Millettia kathgodamensis*", "*Pachira palaeomalabarica*" and "*Sarcosperma mioarboreum*" (Prasad et al. 2004), "*Antidesma miocenicum*" (Prasad & Dwivedi 2007), "*Arytera* (*Ratonia*) *miolittoralis*" and "*Arytera* (*Ratonia*) *nepalensis*" (Prasad et al. 2019), "*Antidesma miocenicum*" (Tiwari et al. 2022), "*Swietenia palaeomahagoni*" (Chandra et al. 2023), "*Phoebe himachalensis*" (Pandey et al. 2023), "*Terminalia miopaniculata*" (Prasad et al. 2025a), "*Ardisia siwalika*" and "*Scolopia himachalensis*" (Prasad et al. 2025b) and "*Canarium siwalicum*" and "*Lagerstroemia himachalensis*" (Prasad et al. 2025c). Since these taxa are based on sound morphological features and are well recognizable, their names are validated here by providing the missing validating requirements. Reference of the validating description and illustrations, holotype and its repository, locality, horizon and age and etymology are provided for each species.

Three replacement names are also proposed for illegitimate names (later homonyms), e.g. *Atalantia prasadii* nom. nov. (≡ *Atalantia miocenica* Mah. Prasad non *Atalantia miocenica* (Saporta in Heer) Rüffle), *Ficus prasadii* nom. nov. (≡ *Ficus nepalensis* Mah. Prasad non *Ficus nepalensis* Spreng. nec *Ficus nepalensis* Blanco – synonym of *Ficus benjamina* L.) and *Ziziphus prasadii* nom. nov. (≡ *Ziziphus miocenica* Mah. Prasad non *Ziziphus miocenica* K.I.M. Chesters). Altogether, 25 new species (sp. nov.) and 3 replacement names (nom. nov.) are proposed.

The various articles of the ICNafp (Turland et al. 2025), relevant to the validation of species names are given below.

Art. 9.1: A holotype of a name of a species or infraspecific taxon is the one specimen or illustration. *(a)* designated in the protologue as the nomenclatural type; or *(b)* used by the author(s) in preparing the protologue when no type was designated; or *(c)* as described in Art. 9, Note 1. As long as the holotype exists, it fixes the application of the name concerned.

Art. 40.2: For the name of a new genus or subdivision of a genus, reference (direct or indirect) to a single species name, or citation of a single element that is the type of a previously or simultaneously published species name, even if that element is not explicitly designated as type, is acceptable as indication of the type.

Art. 40.5: For the name of a new species or infraspecific taxon published on or after 01 January 1990 of which the type is a specimen or unpublished illustration, the single herbarium, collection, or institution in which the type is conserved must be specified.

Art. 43.3: A name of a new fossil-species or infraspecific fossil-taxon published on or after 01 January 2001 is not validly published unless at least one of the validating illustrations is identified as representing the type specimen.

New fossil plant names are registered, through a pilot registration version proposed before the XIX International Botanical Congress at Shenzhen in 2017, in the International Fossil Plant Names Index (IFPNI 2014–onwards) with unique persistent registration barcodes (LSIDs, Life Science Identifiers).

1. VALIDATION OF SPECIES NAMES

1.1. Genus: ***Adinobotrys*** Dunn. (Family *Fabaceae*)

1.1.1. Species: ***Adinobotrys kathgodamensis*** R.K. Saxena, Doweld & Mah. Prasad, **sp. nov.**

Validating description and illustration: "*Millettia kathgodamensis*" Mah. Prasad, R. Ghosh & P.P. Tripathi. 2004, Journal of the Palaeontological Society of India 49: 64, plate IX, figure 3.

Holotype: Specimen no. KTG 121, plate IX, figure 3 (here identified) in Prasad et al. (2004).

Repository: The holotype is stored at the Department of Botany, Maharani Lal Kunwari Postgraduate College, Balrampur, India.

Locality and horizon: Gola River beds near Jamrani, Kathgodam, Nainital District, Uttarakhand, India. Lower Siwalik (Middle Miocene).

IFPNI registration record: F7FBAADE-01E4-390B-FD54-184FCC89C486

Etymology: The species epithet is derived from the locus classicus, Kathgodam (Nainital District, Uttarakhand, India) from near which the holotype was collected. Since the fossil remains were initially compared by authors with extant species *Millettia atropurpurea* (Wall.) Benth. (in Miquel, Pl. Jungh.: 249. 1852), which is accepted as *Adinobotrys atropurpureus* (Wall.) Dunn (Bull. Misc. Inform. Kew 1911: 197. 1911) in current use, we re-classified and validated the new fossil-species, *Adinobotrys kathgodamensis* sp. nov.

Remarks: The proposing authors did not identify validating illustrations representing the type specimen (Art. 43.3, effective since 01 January 2001, Turland et al. 2025). In order to validate the species name, plate IX, figure 3 of Prasad et al. (2004) is here identified as the validating illustration of the holotype.

1.2. Genus: ***Alpinia*** Roxb. (Family: *Zingiberaceae*)

1.2.1. Species: ***Alpinia siwalica*** Mah. Prasad, R. Ghosh & P.P. Tripathi 2004 ex R.K. Saxena, Doweld & Mah. Prasad, **sp. nov.**

Validating description and illustration: "*Alpinia siwalica*" Prasad et al. 2004, Journal of the Palaeontological Society of India 49: 40, plate I, figure 7.

Holotype: Specimen no. KTG 202, plate I, figure 7 (here designated) in Prasad et al. (2004).

Repository: The holotype is stored at the Department of Botany, Maharani Lal Kunwari Postgraduate College, Balrampur, India.

Locality and horizon: Gola River beds near Jamrani, Kathgodam, Nainital District, Uttarakhand, India. Lower Siwalik (Middle Miocene).

IFPNI registration record: 820CC085-6C46-B8C8-5ECA-0DD974BC6D06

Remarks: The proposing authors did not identify validating illustration representing the type specimen (Art. 43.3, effective since 01 January 2001, Turland et al. 2025). In order to validate this species name, the same is here identified as plate I, figure 7 (Prasad et al. 2004).

1.3. Genus: ***Antidesma*** L. (Family: *Phyllanthaceae*)

1.3.1. Species: ***Antidesma prasadii*** Doweld & R.K. Saxena, **sp. nov.**

Validating description and illustration: "*Antidesma miocenicum*" Prasad & Dwivedi 2007, Palaeobotanist 56(1–3): 150, plate 3.1 ("*miocenica*").

Holotype: Specimen no. K-42, plate 3.1 (here identified) in Prasad and Dwivedi (2007).

Repository: The holotype is stored at the Department of Botany, Maharani Lal Kunwari Postgraduate College, Balrampur, India.

Locality and horizon: Imlibasa, Koilabas, western Nepal. Lower Churia Formation (Middle Miocene).

IFPNI registration record: 21921E10-99BB-2547-3A96-8D0CA1224B01

Etymology: The species epithet is in honour of eminent Indian palaeobotanist and explorer of Indian palaeofloras, our co-author, Mahesh Prasad.

Remarks: The proposing authors did not identify validating illustration representing the type specimen (Art. 43.3, effective since 01 January 2001, Turland

et al. 2025). The same situation was with the late homonymic fossil-species "*Antidesma miocenicum*" S. Tiwari et al. 2022, which was not validly published due to the lack of necessary validating illustrations of the holotype (Art. 43.3, effective since 01 January 2001, Turland et al. 2025). Since both fossil leaf remains, bearing the same epithet *miocenicum*, are applied to different fossil forms of *Antidesma* of Miocene epoch, we decided to reject both epithets ("*miocenicum*"), and to validate both fossil forms with different epithets. "*Antidesma miocenicum*" Prasad & Dwivedi 2007 is validated by a new fossil-species, *Antidesma prasadii* Doweld & R.K. Saxena, sp. nov. and "*Antidesma miocenicum*" S. Tiwari et al. 2022 is validated by a new fossil-species, *Antidesma sarkaghatense* R.K. Saxena, Doweld & Mah. Prasad, sp. nov.

1.3.2. Species: ***Antidesma sarkaghatense*** R.K. Saxena, Doweld & Mah. Prasad, **sp. nov.**

≡ "*Antidesma miocenicum*" S. Tiwari et al., Geophytology 50(1–2): 138, figures 3a, c. 2022, nom. inval. ("*miocenica*")

Holotype: Specimen no. MLK/S/309, figure 3a in Tiwari et al. (2022).

Repository: The holotype is stored at the Department of Botany, Maharani Lal Kunwari Postgraduate College, Balrampur, India.

Locality and horizon: Road cutting section about 7 km from Sarkaghat town on the left side of main road leading to Dharampur, Mandi District, Himachal Pradesh, India. Middle Siwalik (Late Miocene).

IFPNI registration record: 6022D9B8-DB79-9E49-8307-4C892F481421

Etymology: The species epithet is after Sarkaghat town from near which the holotype was collected.

Remarks: *Antidesma miocenicum* S. Tiwari et al. was not validly published by their proposing authors because they did not cite information on where its type was stored (Art. 40.5, effective since 01 January 1990, Turland et al. 2025). This species is here validated by providing missing validating information (see discussion above).

1.4. Genus: ***Ardisia*** Sw. (Family: *Primulaceae*)

1.4.1. Species: ***Ardisia siwalika*** Mah. Prasad, S.M. Pandey, Ay. Singh, Huk. Singh & S.K. Singh 2025b ex R.K. Saxena, Doweld & Mah. Prasad, **sp. nov.**

Validating description and illustration: "*Ardisia siwalika*" Prasad et al. 2025b, Geophytology 55(2): 234, figure 6C.

Holotype: Specimen no. 41272 (here designated), figure 6C (here identified) in Prasad et al. (2025b).

Repository: The holotype is stored in the Museum of the Birbal Sahni Institute of Palaeosciences, Lucknow, India.

Locality and horizon: Sagoti bridge section near Bawali (Lat.31°44.265' N, Long. 76°43.339' E) about 7 km from Sarkaghat on Sarkaghat-Dharampur road, Mandi district, Himachal Pradesh, India. Middle Siwalik (Late Miocene).

IFPNI registration record: 22B065B0-980D-5852-8D20-D4FAE6C357D8

Etymology: The species epithet is after the Siwalik Group from which holotype of the species was collected.

Remarks: Prasad et al. (2025b) did not validly publish this species because they designated three specimens (specimen numbers 41272, 41273 and 41274) as holotype and also did not identify the validating illustration representing the type specimen (Art. 43.3, effective since 01 January 2001, Turland et al. 2025). The species name is validated here by designating the holotype (specimen number 41272) and by identifying the validating illustrations representing the holotype (figure 6C).

1.5. Genus: ***Arytera*** Blume (Family: *Sapindaceae*)

1.5.1. Species: ***Arytera miolitoralis*** Mah. Prasad, S. Gautam, Bhowmik, S. Kumar, S.K. Singh 2019 ex R.K. Saxena, Doweld & Mah. Prasad, **sp. nov.**

≡ *Arytera* (*Ratonia*) *miolittoralis* Mah. Prasad, S. Gautam, Bhowmik, S. Kumar, S.K. Singh, Palaeobotanist 68(1): 38, figure 13.3. 2019, nom. inval.

Holotype: BSIP Museum specimen no. 41110, plate 13.3 (here designated) in Prasad et al. (2019).

Repository: The holotype is stored in the Museum of the Birbal Sahni Institute of Palaeosciences, Lucknow, India.

Locality and horizon: Profile 5A (Lat. 27°54'50.6" N, Long. 82°31'00.4" E), Arjun Khola-Ghorai Road section, Arjun Khola area, Deokhuri District, Rapti Anchal, western Nepal. Middle Churia Group (Late Miocene).

IFPNI registration record: E5DECC01-5EAD-03DA-A316-7DA559663E32

Etymology: The species epithet is the combination of *mio* (of Miocene) and *littoralis* (the epithet of extant *Arytera litoralis* Blume), to which the present species is comparable).

Remarks: Prasad et al. (2019) did not identify the validating illustrations representing the type specimen (Art. 43.3, effective since 01 January 2001, Turland et al. 2025). In order to validate this species name, the same is here identified as figure 13.3 (Prasad et al. 2019). Prasad et al. (2019) described this species as *Arytera* (*Ratonia*) *miolittoralis. Ratonia* DC. is an obsolete botanical name and is considered a synonym of the currently accepted genus *Matayba* Aubl. within the family *Sapindaceae*. Alternative names are prohibited since 01 January 1953, hence *Ratonia* is removed from the species name.

1.5.2. Species: ***Arytera nepalensis*** Mah. Prasad, S. Gautam, Bhowmik, S. Kumar, S.K. Singh 2019 ex R.K. Saxena, Doweld & Mah. Prasad, **sp. nov.**

≡ *Arytera* (*Ratonia*) *nepalensis* Mah. Prasad, S. Gautam, Bhowmik, S. Kumar, S.K. Singh, Palaeobotanist 68(1): 36, figure 15.1. 2019, nom. inval.

Holotype: BSIP Museum specimen no. 41103, figure 15.1 in Prasad et al. (2019).

Repository: The holotype is stored in the Museum of the Birbal Sahni Institute of Palaeosciences, Lucknow, India.

Locality and horizon: Profile 5A (Lat. 27°54'50.6" N, Long. 82°3'100.4" E), Arjun Khola-Ghorai Road section, Arjun Khola area, Deokhuri District, Rapti Anchal, western Nepal. Middle Churia Group, (Late Miocene).

IFPNI registration record: EB7B3D79-C4BA-D77A-6350-942E01B44C9E

Etymology: The species epithet is after the country Nepal, where fossil site is located.

Remarks: Prasad et al. (2019) described this species as *Arytera* (*Ratonia*) *nepalensis*. *Ratonia* DC. is an obsolete botanical name and is considered a synonym of the currently accepted genus *Matayba* Aubl. within the family *Sapindaceae*. Alternative names are prohibited since 01 January 1953. *Ratonia* is therefore removed from the species name.

1.6. Genus: ***Canarium*** L. (Family: *Burseraceae*)

1.6.1. Species: ***Canarium siwalicum*** Mah. Prasad, Huk. Singh & S.K. Singh 2025c ex R.K. Saxena, Doweld & Mah. Prasad, **sp. nov.**

Validating description and illustration: "*Canarium siwalicum*" Prasad et al. 2025c, Journal of Palaeosciences 74(2): 91, figure 4.A.

Holotype: BSIP Museum Specimen no. 41250 (here designated), figure 4A (here identified) in Prasad et al. (2025c).

Repository: The holotype is stored in the Museum of the Birbal Sahni Institute of Palaeosciences, Lucknow, India.

Locality and horizon: Sagoti Nala section (Lat. 31°48.496' N, Long. 76°46.061' E) on the left side of Sagoti Bridge, about 7.5 km in SW direction from Sarkaghat, Mandi District, Himachal Pradesh, India. Middle Siwalik (Late Miocene).

IFPNI registration record: ED25B816-712C-57F1-7AE8-F8546C065CBB

Etymology: The species epithet is after Siwalik Group from which holotype of the species was collected.

Remarks: Prasad et al. (2025c) mentioned that this species is represented by two well preserved leaf impressions and designated both of them (BSIP Museum specimen no. 41250 and 41251) as holotype which is contrary to Art. 9.1, 40.3 (effective since 01 January 2001, Turland et al. 2025). Specimen no. 41250 is here designated as holotype and figure 4A (Prasad et al. 2025c) is here identified as the validating illustrations representing the type specimen.

1.7. Genus: ***Derris*** Lour. (Family: *Fabaceae*)

1.7.1. Species: ***Derris prakashii*** Mah. Prasad, R. Ghosh & P.P. Tripathi 2004 ex R.K. Saxena, Doweld & Mah. Prasad, **sp. nov.**

Validating description and illustration: "*Derris prakashii*" Prasad et al. 2004, Journal of the Palaeontological Society of India 49: 69, plate XI, figure 3, nom. inval.

Holotype: Specimen no. KTG 128, plate XI, figure 3 (here identified) in Prasad et al. (2004).

Repository: The holotype is stored at the Department of Botany, Maharani Lal Kunwari Postgraduate College, Balrampur, India.

Locality and horizon: Gola River beds near Jamrani, Kathgodam, Nainital District, Uttarakhand, India. Lower Siwalik (Middle Miocene).

IFPNI registration record: 14E4CDDD-0626-C672-5D82-8B089AF58E63

Etymology: The species epithet honours Dr Uttam Prakash of the Birbal Sahni Institute of Palaeosciences, Lucknow, India.

Remarks: The proposing authors did not identify validating illustrations representing the type specimen (Art. 43.3, effective since 01 January 2001, Turland et al. 2025). In order to validate this species name, the same is here identified as plate XI, figure 3 (Prasad et al. 2004).

1.8. Genus: ***Entada*** Adans. (Family: *Fabaceae*)

1.8.1. Species: ***Entada awasthii*** R.K. Saxena, Doweld & Mah. Prasad, **sp. nov.**

≡ "*Entada palaeoscandens*" N. Awasthi & Mah. Prasad (pro parte) nom. inval., Palaeobotanist 38: 309. plate 4, figure 5. 1990.

Diagnosis: Leaflet simple, almost symmetrical, elliptic, preserved length and width 5.2 × 2.6 cm; apex missing; base slightly incomplete, probably acute; margin entire; texture chartaceous; petiole missing, venation pinnate, semicraspedodromous; primary vein prominent, moderate in thickness, almost straight; secondary veins about 8–9 pairs visible, mostly alternate, nearly straight, branching just within the margin, one of the branches seemingly terminating at the margin and the other joining superadjacent secondary, angle of divergence acute (about 60–70°), moderate in thickness; intersecondary veins present, simple, abundant, tertiary veins fine, with angle of origin AR–RO, ramified, branched, oblique to right angle in relation to mid-vein, alternate and close (after Awasthi & Prasad 1990).

Holotype: Specimen no BSIP 36504, plate 4, figure 5 in Awasthi and Prasad (1990).

Repository: The holotype is stored in the museum of the Birbal Sahni Institute of Palaeosciences, Lucknow, India.

Locality and horizon: Chor Khola beds: Woodseam, Surai Khola area, western Nepal; Chor Khola Formation.

IFPNI registration record: 8BAA6068-C203-64E2-BCA5-E9DEA42BE0B7

Etymology: The species epithet honours Dr. Nilambar Awasthi, of the Birbal Sahni Institute of Palaeosciences, Lucknow, India.

Remarks: Awasthi and Prasad (1990) included both leaf and seed in *Entada palaeoscandens* and designated two holotypes (one for leaf and other for seed). For this reason, this species was not validly published. *Entada awasthii* is here proposed for leaf fossil with proper holotype designation (specimen no BSIP 36504, plate 4, figure 5 of Awasthi and Prasad 1990).

1.8.2. Species: ***Entada miophaseoloides*** R.K. Saxena, Doweld & Mah. Prasad, **sp. nov.**

≡ *Entada palaeoscandens* N. Awasthi & Mah. Prasad (pro parte) nom. inval., Palaeobotanist 38: 309. plate 5, figures 3, 4. 1990.

Diagnosis: Seed large in size, about 4.5 cm in diameter, slightly flattened, circular to orbicular, cordate or reniform with a pronounced sinus at the hilum (after Awasthi & Prasad 1990).

Holotype: BSIP Museum specimen no 36505, plate 5, figure 3 in Awasthi and Prasad (1990).

Repository: The holotype is stored in the museum of the Birbal Sahni Institute of Palaeosciences, Lucknow, India.

Locality and horizon: Surai Khola beds, Kaila Khola, western Nepal; Surai Khola Formation.

IFPNI registration record: FC49C265-9670-2429-4B04-9953FEF6D757.

Etymology: The species epithet is the combination of *mio* (of Miocene) and *phaseoloides* (the epithet of extant *Entada phaseoloides* (L.) Merr. = *Entada scandens* Benth., pro syn.), to which the present species was comparable).

Remarks: *Entada palaeoscandens* was not validly published by their proposing authors because they did not designate a type (Art. 9, Note 1, effective since 01 January 1958, Turland et al. 2025). Since their comparison of the fossil remains was made with extant species, *Entada scandens* Benth., which is a synonym of extant *Entada phaseoloides* (L.) Merr., which is in current use, a new species epithet, *Entada miophaseoloides* is proposed here only for seeds with proper holotype designation (specimen no BSIP 36505, plate 5, figure 3 of Awasthi and Prasad 1990).

1.9. Genus: ***Ficus*** L. (Family *Moraceae*)

1.9.1. Species: ***Ficus eodrupacea*** R.K. Saxena, Doweld & Mah. Prasad, **sp. nov.**

≡ "*Ficus eomysorensis*" P.P. Tripathi, S.M. Pandey & Mah. Prasad, Biological Memoirs 28(2): 88, plate 3, figures 9, 11, 12. 2002.

Validating description and illustration: "*Ficus eomysorensis*" Tripathi et al. 2002, Biological Memoirs 28(2): 88, plate 3, figure 9.

Holotype: Specimen no. Kb-28, plate 3, figure 9 (here identified) in Tripathi et al. (2002).

Repository: The holotype is stored at the Department of Botany, Maharani Lal Kunwari Postgraduate College, Balrampur, India.

Locality and horizon: Koilabas village, near Jarwa, Balrampur District, Uttar Pradesh, India. Lower Siwalik (Middle Miocene).

IFPNI registration record: 8920AE0D-7BD5-620D-FC9F-05E9AD977426

Etymology: The former fossil-species epithet is the combination of the prefix *eo* (indicating "early" or "primeval") and *mysorensis* (the epithet of extant *Ficus mysorensis* to which the present species is comparable).

Remarks: Tripathi et al. (2002) mentioned that this species is represented by two leaf specimens (specimen numbers Kb-28 and Kb-29) and designated specimen no. Kb-28 as a holotype. However, they did not identify any validating illustration as representing the type specimen which is contrary to Art. 43.3 (effective since 01 January 2001, Turland et al. 2025). Since comparison of the fossil remains was made with extant species, *Ficus mysorensis* Roth, which is a synonym of extant *Ficus drupacea* Thunb., a name in current use; a new species epithet, *Ficus eodrupacea* is proposed here with a proper holotype designation and validating illustration (specimen no Kb-28, plate 3, figure 9 of Tripathi et al. 2002).

1.10. Genus: ***Fissistigma*** Griff. (Family: *Annonaceae*)

1.10.1. Species: ***Fissistigma jarwaense*** R.K. Saxena, Doweld & Mah. Prasad, **sp. nov.**

≡ "*Melodorum jarwaense*" P.P. Tripathi, S.M. Pandey, Mah. Prasad, Biological Memoirs 28(2): 82, plate 1, figures 1, 3, plate 2, figure 1. 2002, nom. inval.

Holotype: Specimen no. Kb-22, plate 1, figure 1 (here identified) in Tripathi et al. (2002).

Repository: The holotype is stored at the Department of Botany, Maharani Lal Kunwari Postgraduate College, Balrampur, India.

Locality and horizon: Koilabas village near Jarwa, Balrampur District, Uttar Pradesh, India. Lower Siwalik (Middle Miocene).

IFPNI registration record: 99F50CDC-8CF0-73FE-1E03-1F286506FA5A

Etymology: The species epithet is derived from the geographical name Jarwa near which the type locality Koilabas village is situated.

Remarks: Tripathi et al. (2002) mentioned that this fossil-species is represented by three leaf specimens and designated specimen number Kb-22 as a holotype and specimen number Kb-23 as a paratype. However, they did not identify any validating illustration as representing the type specimen which is contrary to the Art. 43.3 (effective since 01 January 2001, Turland et al. 2025). In order to validate this species name, plate 1, figure 1 of Tripathi et al. (2002) is here identified as representing the holotype. Since fossil "*Melodorum jarwaense*" was related with extant species *Melodorum bicolor* (Roxb.) Hook.f. & Thomson (Fl. Ind. 1: 119. 1855), which is a synonym of extant *Fissistigma bicolor* (Roxb.) Merr. (Philipp. J. Sci. 15: 131. 1919) [POWO 2026, https://powo.science.kew.org/taxon/73003-1], *Melodorum jarwaense* is replaced by a new name, ***Fissistigma jarwaense*** R.K. Saxena, Doweld & Mah. Prasad, sp. nov.. The relationship of this fossil-species to another fossil-species, based on the leaves from Miocene (Lower Siwalik Formation) of India, *Fissistigma palaeobicolor* Ash. Joshi & R.C. Mehrotra (J. Geol. Soc. India 69(6): 1256. 2007), needs a further study.

1.11. Genus: ***Lagerstroemia*** L. (Family *Lythraceae*)

1.11.1. Species: ***Lagerstroemia himachalensis*** Mah. Prasad, Huk. Singh & S.K. Singh 2025c ex R.K. Saxena, Doweld & Mah. Prasad, **sp. nov.**

Validating description and illustration: "*Lagerstroemia himachalensis*" Prasad et al. 2025c, Journal of Palaeosciences 74(2): 92, figure 5A.

Holotype: BSIP Museum specimen no. 41269 (here designated), figure 5A (here designated) in Prasad et al. (2025c).

Repository: The holotype is stored in the Museum of the Birbal Sahni Institute of Palaeosciences, Lucknow, India.

Locality and horizon: Sagoti Bridge section near Bawali (Lat. 31°44.265' N, Long. 76°43.339' E) about 7 km from Sarkaghat on Sarkaghat–Dharampur Road, Mandi District, Himachal Pradesh, India. Middle Siwalik (Late Miocene).

IFPNI registration record: 1E3FD063-C73E-CD62-49A1-224E21A35DE1

Etymology: The specific epithet is after Himachal Pradesh state from where the holotype was collected.

Remarks: Prasad et al. (2025c) did not validly publish this species because they designated two specimens (specimen numbers 41269 and 41270) as holotype and also did not identify the validating illustrations representing the type specimen (Art. 43.3, effective since 01 January 2001, Turland et al. 2025). The species name is validated here by designating the holotype (specimen number 41269) and by identifying the validating illustrations representing the holotype (figure 5A).

1.11.2. Species: ***Lagerstroemia jamraniensis*** Mah. Prasad, R. Ghosh & P.P. Tripathi ex R.K. Saxena, Doweld & Mah. Prasad, **sp. nov.**

Validating description and illustration: "*Lagerstroemia jamraniensis*" Mah. Prasad, R. Ghosh & P.P. Tripathi, J. Palaeontol. Soc. India 49: 70. 2004, nom. inval.

Holotype (here designated): Specimen KTG 131, PI. XI, fig. 8 (here identified) in Prasad et al. (2004).

Repository: The holotype is stored at the Department of Botany, Maharani Lal Kunwari Postgraduate College, Balrampur, India.

Locality and horizon: Gola River beds near Jamrani, Kathgodam, District Nainital, Uttarakhand, India. Lower Siwalik Formation (Late Miocene).

IFPNI registration record: 172FC8E1-DEE1-BCE6-9A34-4A8E1EA0F920

Etymology: The specific epithet is after Jamrani from where the holotype was collected.

Remarks: Prasad et al. (2004) did not validly publish this species because they designated holotype and paratype, but failed to identify the validating illustrations representing the type specimen (Art. 43.3, effective since 01 January 2001, Turland et al. 2025). The species name is validated here by designating the holotype (specimen number KTG 131) and by identifying the validating illustrations representing the holotype (plate XI, fig. 8).

1.12. Genus: ***Lepidopetalum*** Blume (Family: *Sapindaceae*)

1.12.1. Species: ***Lepidopetalum miocenicum*** R.K. Saxena, Doweld & Mah. Prasad, **sp. nov.**

Validating description and illustration: "*Cupania miocenica*" Prasad et al. 2004, Journal of the Palaeontological Society of India 49: 62, plate VIII, figure 5, nom. inval.

Holotype (here designated): Specimen no. KTG 118, plate VIII, figure 5 in Prasad et al. (2004).

Repository: The holotype is stored at the Department of Botany, Maharani Lal Kunwari Postgraduate College, Balrampur, India.

Locality and horizon: Gola River beds near Jamrani, Kathgodam, Nainital District, Uttarakhand, India. Lower Siwalik (Middle Miocene).

IFPNI registration record: 340C3FCC-B60F-03C9-C812-3D725AED537B

Etymology: The species epithet is after the age of the sediments (Miocene) from which holotype of the species was collected.

Remarks: The proposing authors did not identify validating illustrations representing the type specimen (Art. 43.3, effective since 01 January 2001, Turland et al. 2025), in order to validate the fossil-species name, the same is here identified as plate VIII, figure 5 (Prasad et al. 2004). Since the fossil leaf remains were initially compared by authors with extant species *Cupania jackiana* Hiern (in J.D. Hooker, Fl. Brit. India 1: 678. 1875), which is accepted as a synonym of extant *Lepidopetalum montanum* (Blume) Radlk. (Sitzungsber. Math.-Phys. Cl. Königl. Bayer. Akad. Wiss. München 9: 623. 1879) in current use, we re-classified and validated the new fossil-species, *Lepidopetalum miocenicum* R.K. Saxena, Doweld & Mah. Prasad, sp. nov.

1.13. Genus: ***Maasia*** Mols, Kessler & Rogstad (Family *Annonaceae*)

1.13.1. Species: ***Maasia palaeosumatrana*** R.K. Saxena, Doweld & Mah. Prasad, **sp. nov.**

Validating description and illustration: "*Polyalthia palaeosumatrana*" P.P. Tripathi, S.M. Pandey, Mah. Prasad, 2002, Biological Memoirs 28(2): 84, plate 1, figure 5.

Holotype: Specimen no. Kb-24, plate 1, figure 5, (here identified) in Tripathi et al. (2002).

Repository: The holotype is stored at the Department of Botany, Maharani Lal Kunwari Postgraduate College, Balrampur, India.

Locality and horizon: Koilabas village, near Jarwa, Balrampur District, Uttar Pradesh, India. Lower Siwalik (Middle Miocene).

IFPNI registration record: 0FD1C475-A0F5-C741-C0C6-6DD7C8CBA378

Etymology: The species epithet is retained as the combination of *palaeo* (indicating ancient) and *sumatrana* (the epithet of extant *Maasia sumatrana* (Miq.) Mols, Kessler & Rogstad (Syst. Bot. 33: 493. 2008), to which the present species resembles, which is in current use instead of obsolescent *Polyalthia sumatrana* (Miq.) Kurz (J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 43: 53. 1874).

Remarks: Tripathi et al. (2002: 86) mentioned that this fossil-species is represented by two specimens. They designated specimen number Kb-24 as a holotype. However, they did not identify any validating illustration as representing the type specimen which is contrary to Art. 43.3 (effective since 01 January 2001, Turland et al. 2025). In order to validate the fossil-species name, the same is here identified as plate 1, figure 5 (Tripathi et al. 2002).

1.14. Genus: ***Miliusa*** Lesch. ex A. DC. (Family *Annonaceae*)

1.14.1. Species: ***Miliusa miovelutina*** P.P. Tripathi, S.M. Pandey, Mah. Prasad 2002 ex R.K. Saxena, Doweld & Mah. Prasad, **sp. nov.**

Validating description and illustration: "*Miliusa miovelutina*" Tripathi et al. 2002, Biological Memoirs, 28(2): 80, plate 2, figures 2, 3).

Holotype: Specimen Number Kb-20, plate 2, figure 2 (here designated) in Tripathi et al. (2002).

Repository: The holotype is stored at the Department of Botany, Maharani Lal Kunwari Postgraduate College, Balrampur, India.

Locality and horizon: Koilabas village, near Jarwa, Balrampur District, Uttar Pradesh, India. Lower Siwalik (Middle Miocene).

IFPNI registration record: A1DA3C78-8F2F-927D-6C0D-0AEBBA57335B

Etymology: The species epithet is the combination of *mio* (of Miocene) and *velutina* (the epithet of extant *Miliusa velutina* to which the present species is comparable).

Remarks: Tripathi et al. (2002) mentioned that this species is represented by two specimens. They designated specimen number Kb-20. as holotype. However, they did not identify any validating illustration as representing the type specimen which is contrary to Art. 43.3 (effective since 01 January 2001, Turland et al. 2025). In order to validate this species name, plate 2, figure 2 of Tripathi et al. (2002) is here identified as representing the holotype.

1.15. Genus: ***Pachira*** Aubl. (Family *Malvaceae*)

1.15.1. Species: ***Pachira kathgodamica*** R.K. Saxena, Doweld & Mah. Prasad, **sp. nov.**

Validating description and illustration: "*Pachira palaeomalabarica*" Prasad et al. 2004, Journal of the Palaeontological Society of India 49: 56, plate VI, figure 1.

Holotype: Specimen no. KTG 113A, plate VI, figure 1 (here designated) in Prasad et al. (2004).

Repository: The holotype is stored at the Department of Botany, Maharani Lal Kunwari Postgraduate College, Balrampur, India.

Locality and horizon: Gola River beds near Jamrani, Kathgodam, Nainital District, Uttarakhand, India. Siwalik Formation (Middle Miocene).

IFPNI registration record: 2D798F4E-30BD-8091-C313-D78996FA10F3

Etymology: The new species epithet is derived from the *locus classicus*, Kathgodam (Nainital District, Uttarakhand, India); the former combination of *palaeo* (indicating "ancient") and *malabarica* (the epithet of extant, but not validly published "*Pachira malabarica*"), to which the present fossil-species was compared by its authors), is rejected since the extant plant name "*Pachira malabarica*" has no standing in modern botanical nomenclature.

Remarks: The proposing authors did not identify validating illustrations representing the type specimen (Art. 43.3, effective since 01 January 2001, Turland et al. 2025). In order to validate the new fossil-species name, the same is here identified as plate VI, figure 1 (Prasad et al. 2004).

1.16. Genus: ***Phoebe*** Nees (Family *Lauraceae*)

1.16.1. Species: ***Phoebe himachalensis*** S.M. Pandey, Shashi, G.J. Kushw., Mah. Prasad & Alok 2023 ex R.K. Saxena, Doweld & Mah. Prasad, **sp. nov.**

Validating description and illustration: "*Phoebe himachalensis*" Pandey et al. 2023, International Journal of Ecology and Environmental Sciences 49(5): 526, figures 3e, g, h.

Holotype: Specimen no. MLK/S/105, figure 3e (here identified) in Pandey et al. (2023).

Repository: The holotype is stored at the Department of Botany, Maharani Lal Kunwari Postgraduate College, Balrampur, India.

Locality and horizon: Road cutting section (Lat. 31°44.265' N, Long. 76°43.339' E), about 7 km from Sarkaghat town on the left side of main road which leads to Dharampur, Mandi District, Himachal Pradesh, India. Middle Siwalik (Late Miocene).

IFPNI registration record: 9C60AB0B-D5BA-92BC-0E2D-293E3C511360

Etymology: The species epithet is derived from Himachal Pradesh from where the fossil specimens were collected.

Remarks: This species was not validly published by their proposing authors because they did not cite information on where its type was stored (Art. 40.5, effective since 01 January 1990, Turland et al. 2025). Pandey et al. (2023, p 526) mentioned "Material: One specimen", but they cited and figured two specimens, viz. 1. MLK/S/105 (holotype, figure 3e, h); and 2. MLK/S/106 (paratype, figure 3g).

1.17. Genus: ***Sarcosperma*** Hook.f. (Family *Sapotaceae*)

1.17.1. Species: ***Sarcosperma mioarboreum*** Mah. Prasad, R. Ghosh & P.P. Tripathi 2004 ex R.K. Saxena, Doweld & Mah. Prasad, **sp. nov.**

Validating description and illustration: "*Sarcosperma mioarboreum*" Prasad et al. 2004, Journal of the Palaeontological Society of India 49: 71, plate 13, figure 1.

Holotype: Specimen no. KTG 133, plate XIII, figure 1 (here identified) in Prasad et al. (2004).

Repository: The holotype is stored at the Department of Botany, Maharani Lal Kunwari Postgraduate College, Balrampur, India.

Locality and horizon: Gola River beds near Jamrani, Kathgodam, Nainital District, Uttarakhand, India. Siwalik Formation (Middle Miocene).

IFPNI registration record: CD30A0E6-78D3-0096-17E2-08913C03B24D

Etymology: The species epithet is the combination of *mio* (of Miocene) and *arboretum* (the epithet of extant *Sarcosperma arboreum* Hook.f.), to which the present species is comparable.

Remarks: The proposing authors did not identify validating illustrations representing the type specimen (Art. 43.3, effective since 01 January 2001, Turland et al. 2025). In order to validate this species name, the same is here identified as plate XIII, figure 1 (Prasad et al. 2004).

1.18. Genus: ***Scolopia*** Schreb. (Family *Salicaceae*)

1.18.1. Species: ***Scolopia himachalensis*** Mah. Prasad, S.M. Pandey, Ay. Singh, Huk. Singh & S.K. Singh 2025b "*Scolpia himachalensis*" ex R.K. Saxena, Doweld & Mah. Prasad, **sp. nov.**

Validating description and illustration: In: Prasad et al. 2025b, Geophytology 55(2): 226, figure 4.E.

Holotype: BSIP Museum specimen no. 41245 (here designated), figure 4E (here identified) in Prasad et al. (2025b).

Repository: The holotype is stored in the Museum of the Birbal Sahni Institute of Palaeosciences, Lucknow, India.

Locality and horizon: Near Maseran (31.6918°N, 76.7468°E), about 8 km from Sarkaghat on Sarkaghat-Rewalsar road, Mandi District, Himachal Pradesh, India. Middle Siwalik (Late Miocene).

IFPNI registration record: B2E99EAA-81E3-15E2-ACBA-FF011927F091

Etymology: The species epithet is after Himachal Pradesh state where the locality of the holotype is situated.

Remarks: Prasad et al. (2025) did not validly publish this species name because they designated two specimens (specimen numbers 41245 and 41246) as holotype and also did not identify the validating illustrations representing the type specimen (Art. 43.3, effective since 01 January 2001, Turland et al. 2025). The species name is validated here by designating the holotype (specimen number 41245) and by identifying

the validating illustrations representing the type specimen (figure 4E).

1.19. Genus: ***Swietenia*** Jacq. (Family *Meliaceae*)

1.19.1. Species: ***Swietenia palaeomahagoni*** Kaj. Chandra, Anum. Shukla, M. Bansal & Vand. Prasad 2023 ex R.K. Saxena, Doweld & Mah. Prasad, **sp. nov.**

Validating description and illustration: "*Swietenia palaeomahagoni*" Chandra et al. 2023, Journal of the Geological Society of India 99: 65, figure 3A.

Holotype: BSIP Museum specimen no. 1/42203, figure 3A (here designated) in Chandra et al. (2003).

Repository: The holotype is stored in the Museum of the Birbal Sahni Institute of Palaeosciences, Lucknow, India.

Locality and horizon: Gurha lignite mine, East (Lat. 27.87398° N, Long. 72.86709° E), Bikaner district, Rajasthan, India. Palana Formation (Late Paleocene-Early Eocene).

IFPNI registration record: A766D622-CC40-D22C-6F16-8C220A7DF8FE

Etymology: The species epithet is the combination of palaeo (indicating "ancient") and *mahagoni* (the epithet of extant *Swietenia mahagoni* (L.) Jacq.), to which the present species is comparable.

Remarks: The proposing authors did not identify validating illustrations representing the type specimen (Art. 43.3, effective since 01 January 2001, Turland et al. 2025). In order to validate this species name, the same is here identified as figure 3A (Chandra et al. 2023).

1.20. Genus: ***Syzygium*** Gaertn. (Family *Myrtaceae*)

1.20.1. Species: ***Syzygium miocenicum*** Mah. Prasad & U. Prakash 1984 ex R.K. Saxena, Doweld & Mah. Prasad, **sp. nov.**

Validating description and illustration: "*Syzygium miocenicum*" Prasad & Prakash 1984, Proceedings of the 5th Indian Geophytological Conference, Lucknow, 1983: 251, plate 2, figure 7.

Holotype: BSIP Museum specimen no. 35713 (here designated), plate 2, figure 7 (here designated) in Prasad and Prakash (1984).

Repository: The holotype is stored in the Museum of the Birbal Sahni Institute of Palaeosciences, Lucknow, India.

Locality and horizon: Koilabas village, about 4 km inside western Nepal, near Jarwa in Balrampur District, Uttar Pradesh, India. Lower Siwalik (Middle Miocene).

IFPNI registration record: C7BBAF15-4109-D5FE-C586-9D1AE5EC7DB9

Etymology: The species epithet is after the age of the sediments (Miocene) from which holotype of the species was collected.

Remarks: Prasad and Prakash (1984) mentioned that this species is represented by three leaf impressions and designated all of them (BSIP Museum specimen no. 35713–35715) as holotype which is contrary to Art. 9.1, 40.3 (effective since 01 January 1958, Turland et al. 2025). In order to validate this species name, specimen no. BSIP 35713 is here designated as holotype and plate 2, figure 7 is here identified as the validating illustration representing the holotype (Prasad & Prakash 1984).

1.21. Genus: ***Terminalia*** L. (Family *Combretaceae*)

1.21.1. Species: ***Terminalia miopaniculata*** Mah. Prasad, S.M. Pandey, Shashi, G.J. Kushw. & Alok 2025a ex R.K. Saxena, Doweld & Mah. Prasad, **sp. nov.**

Validating description and illustration: "*Terminalia miopaniculata*" Prasad et al. 2025a, International Journal of Ecology and Environmental Sciences 51(1): 64, figure 3a.

Holotype: BSIP museum Specimen no. 41267 (here designated), figure 3a (here identified) in Prasad et al. (2025a).

Repository: The holotype is stored in the museum of the Birbal Sahni Institute of Palaeosciences, Lucknow, India.

Locality and horizon: Sagoti Bridge Section near Bawali (Lat. 31°44.265' N, Long. 76°43.339' E) about 7 km from Sarkaghat on Sarkaghat-Dharampur Road, Mandi District, Himachal Pradesh, India. Middle Siwalik (Late Miocene).

IFPNI registration record: 65289699-0A72-80D0-6D93-FCE8674844E6

Etymology: The species epithet is the combination of *mio* (of Miocene) and *paniculata* (the epithet of extant *Terminalia paniculata* to which the present species resembles).

Remarks: Prasad et al. (2025a) mentioned that this species is represented by two well preserved leaf impressions and designated both of them (BSIP Museum specimen no. 41267–41268) as holotype which is contrary to Art. 40.2 (Turland et al. 2025). In order to validate this species name, specimen no. 41267 is here designated as holotype and figure 3a (Prasad et al. (2025a) is here identified as the validating illustration representing the type specimen.

2. REPLACEMENT NAMES

Three illegitimate, but validly published fossil-species names (later homonyms) are recognized. These are: *Atalantia prasadii* nom. nov. (≡ *Atalantia miocenica* Mah. Prasad non *Atalantia miocenica* (Saporta) Rüffle), *Ficus prasadii* nom. nov. (≡ *Ficus nepalensis* Mah. Prasad non *Ficus nepalensis* Spreng. nec *Ficus nepalensis* Blanco, synonym of *Ficus benjamina* L.) and *Ziziphus prasadii* nom. nov. (≡ *Ziziphus miocenica* Mah. Prasad non *Ziziphus miocenica* K.I.M. Chesters).

Two more homonymic names, but originally both invalidly published, are validated with new names: *Antidesma prasadii* sp. nov. instead of "*Antidesma miocenica*" Mah. Prasad & H.D. Dwivedi, nom. inval. (from Nepal), and *Antidesma sarkaghatense* sp. nov. against "*Antidesma miocenicum*" S. Tiwari et al., nom. inval. from Himachal Pradesh, India (see above).

2.1. Genus: ***Atalantia*** Corrêa (Family: *Rutaceae*)

2.1.1. Species: ***Atalantia prasadii*** Doweld & R.K. Saxena, **nom. nov.**

≡ *Atalantia miocenica* Mah. Prasad, Palaeobotanist 42(2): 132, plate 7, figure 1. 1994a non *Atalantia miocenica* (Saporta) Rüffle, Paläontologische Abhandlungen, Deutsche Gesellschaft für Geologische Wissenschaften 1(3): 220. 1963.

Holotype: BSIP Museum specimen no. 36882, plate 7, figure 1 in Prasad (1994a).

Repository: The holotype is stored in the Museum of the Birbal Sahni Institute of Palaeosciences, Lucknow, India.

Locality and horizon: Darwaja, Koilabas area, western Nepa1. Lower Siwalik (Middle Miocene).

IFPNI registration record: BDDDBE7B-1A1A-8F3E-382A-892EB90ABA7D

Etymology: The species epithet is in honour of eminent Indian palaeobotanist and explorer of Indian palaeofloras, our co-author, Mahesh Prasad.

Remarks: *Atalantia miocenica* Mah. Prasad 1994a is a later homonym of *Atalantia miocenica* (Saporta) Rüffle 1963, hence illegitimate. Therefore, a new replacement name (*Atalantia prasadii* nom. nov.), is proposed here.

2.2. Genus: ***Ficus*** L. (Family *Moraceae*)

2.2.1. Species: ***Ficus prasadii*** Doweld & R.K. Saxena, **nom. nov.**

≡ *Ficus nepalensis* Mah. Prasad, Geophytology 19(1): 97, plate 11, figures 1, 3. 1989 non *Ficus nepalensis* Spreng., *Systema Vegetabilium*, ed. 16, 3: 779. 1826 nec *Ficus nepalensis* Blanco, Fl. Filip. ed. 2: 474. 1845.

Holotype: BSIP Museum specimen no. BSIP 36182, plate 11, figures 1, 3 in Prasad (1989).

Repository: The holotype is stored in the Museum of the Birbal Sahni Institute of Palaeosciences, Lucknow, India.

Locality and horizon: Koilabas village, Nepal (near Jarwa, Balrampur District, Uttar Pradesh, India). Lower Siwalik (Middle Miocene).

IFPNI registration record: BE302316-AAB9-1408-06A1-683A814A065F

Etymology: The species epithet is in honour of eminent Indian palaeobotanist and explorer of Indian palaeofloras, our co-author, Mahesh Prasad.

Remarks: *Ficus nepalensis* Mah. Prasad 1990 is a later homonym of extant *Ficus nepalensis* Spreng. 1826 and also of *Ficus nepalensis* Blanco 1845, hence illegitimate. Therefore, a new replacement name (*Ficus prasadii* nom. nov.) is proposed here.

2.3. Genus: ***Ziziphus*** Mill. (Family: *Rhamnaceae*)

2.3.1. Species: ***Ziziphus prasadii*** Doweld & R.K. Saxena, **nom. nov.**

≡ *Ziziphus miocenica* Mah. Prasad, Tertiary Research 15(2): 67, plate 5, figures 6, 7. 1994b, nom. illeg. "*miocenicus*" non *Ziziphus miocenica* K.I.M. Chesters, Palaeontographica, Abt. B, Paläophytol. 101(1–4): 47. 1957.

Holotype: BSIP Museum specimen no. 36822, plate 5, figure 6 in Prasad (1994b).

Repository: The holotype is stored in the Museum of the Birbal Sahni Institute of Palaeosciences, Lucknow, India.

Locality and horizon: Gola River beds, Kathgodam, Haldwani District, Uttarakhand, India. Lower Siwalik (Middle Miocene).

IFPNI registration record: 04532374-8E1B-50E7-44D5-27D21936AD91

Etymology: The species epithet is in honour of eminent Indian palaeobotanist and explorer of Indian palaeofloras, our co-author, Mahesh Prasad.

Remarks: *Ziziphus miocenica* Mah. Prasad 1994b is a later homonym of *Ziziphus miocenica* K.I.M. Chesters 1957, hence illegitimate. Therefore, a new replacement name (*Ziziphus prasadii* nom. nov.) is proposed here.

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