



The Journal of Threatened Taxa (JoTT) is dedicated to building evidence for conservation globally by publishing peer-reviewed articles online every month at a reasonably rapid rate at www.threatenedtaxa.org. All articles published in JoTT are registered under [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/) unless otherwise mentioned. JoTT allows unrestricted use, reproduction, and distribution of articles in any medium by providing adequate credit to the author(s) and the source of publication.

Journal of Threatened Taxa

Building evidence for conservation globally

www.threatenedtaxa.org

ISSN 0974-7907 (Online) | ISSN 0974-7893 (Print)

NOTE

NEW DISTRIBUTION RECORD OF TWO ENDEMIC PLANT SPECIES, *EUPHORBIA KADAPENSIS* SAROJIN. & R.R.V. RAJU (EUPHORBIACEAE) AND *LEPIDAGATHIS KERALENSIS* MADHUS. & N.P. SINGH (ACANTHACEAE), FOR KARNATAKA, INDIA

P. Raja, N. Dhatchanamoorthy, S. Soosairaj & P. Jansirani

26 October 2020 | Vol. 12 | No. 14 | Pages: 17045–17048

DOI: 10.11609/jott.4978.12.14.17045-17048



For Focus, Scope, Aims, Policies, and Guidelines visit <https://threatenedtaxa.org/index.php/JoTT/about/editorialPolicies#custom-0>

For Article Submission Guidelines, visit <https://threatenedtaxa.org/index.php/JoTT/about/submissions#onlineSubmissions>

For Policies against Scientific Misconduct, visit <https://threatenedtaxa.org/index.php/JoTT/about/editorialPolicies#custom-2>

For reprints, contact <ravi@threatenedtaxa.org>

The opinions expressed by the authors do not reflect the views of the Journal of Threatened Taxa, Wildlife Information Liaison Development Society, Zoo Outreach Organization, or any of the partners. The journal, the publisher, the host, and the partners are not responsible for the accuracy of the political boundaries shown in the maps by the authors.

Member



Publisher & Host



Threatened Taxa



New distribution record of two endemic plant species, *Euphorbia kadapensis* Sarojin. & R.R.V. Raju (Euphorbiaceae) and *Lepidagathis keralensis* Madhus. & N.P. Singh (Acanthaceae), for Karnataka, India

P. Raja¹ , N. Dhatchanamoorthy² , S. Soosairaj³ & P. Jansirani⁴

¹ PG & Research Department of Botany, J.J. College of Arts and Science (Autonomous), Pudukkottai, Tamil Nadu 622422, India.

² National Herbarium of Medicinal Plants and Repository of Raw Drug, School of Conservation of Natural Resources, Trans Disciplinary University (TDU), Foundation for Revitalisation of Health Traditions (FRLHT), 74/2, Jarakabande Kaval, Yelahanka, Bengaluru, Karnataka 560064, India.

³ Department of Botany, St. Joseph's College (Autonomous), Tiruchirappalli, Tamil Nadu 620002, India.

⁴ PG & Research Department of Botany, The Madura College (Autonomous), Madurai, Tamil Nadu 625011, India.

¹ raja.plantbiology@gmail.com (corresponding author), ² dhatcha@gmail.com, ³ pspssoosai@yahoo.co.in, ⁴ jansishankar@gmail.com

Euphorbia L., sensu lato is a cosmopolitan genus distributed almost throughout the world. It comprises 1,836 species in the world, of which 84 species indigenous or naturalized and three species are cultivated in India (Binojkumar & Balakrishnan 2010, 2012). Recently *Euphorbia kadapensis* Sarojin. & R.R.V. Raju (2014), *Euphorbia gokakensis* S.R. Yadav, Malpure & Chandore (2016), and *Euphorbia seshachalamensis* Prasad & Prasanna (2016) were added to the Indian flora as new species.

Lepidagathis Willd. comprises about 100 species, mainly distributed in the tropical and warm regions of the world (Mabberley 2017). In India, the genus is represented by 23 species and eight varieties, among them 15 species are endemic to the Western Ghats and Eastern Ghats of southern India (Nayar et al. 2014; Singh et al. 2015).

During a recent botanical exploration in Karnataka State, we collected specimens of two interesting

species of the genera *Euphorbia* and *Lepidagathis*. After thorough scrutiny in previously published Floras and research articles (Binojkumar & Balakrishnan 2010, 2012; Sarojinidevi & Reddivenkataraju 2014; Madhusoodanan & Singh 1992), they were identified as *E. kadapensis* Sarojin. & R.R.V. Raju (Euphorbiaceae), endemic to Andhra Pradesh and *L. keralensis* Madhus. & N.P. Singh (Acanthaceae), an endemic species of Kerala. *Euphorbia kadapensis* was described by Sarojinidevi & Raju in 2014 from the Kadappa District of Andhra Pradesh while *L. keralensis* was described by Madhusoodanan & Singh in 1992 from the west coast of Kerala and so far has not been reported from Karnataka. Hence the present collections form new distributional records of the species for Karnataka. A brief description, distribution and photographs are provided here for easy identification.

Editor: V. Sampath Kumar, Botanical Survey of India, Coimbatore, India.

Date of publication: 26 October 2020 (online & print)

Citation: Raja, P., N. Dhatchanamoorthy, S. Soosairaj & P. Jansirani (2020). New distribution record of two endemic plant species, *Euphorbia kadapensis* Sarojin. & R.R.V. Raju (Euphorbiaceae) and *Lepidagathis keralensis* Madhus. & N.P. Singh (Acanthaceae), for Karnataka, India. *Journal of Threatened Taxa* 12(14): 17045–17048. <https://doi.org/10.11609/jott.4978.12.14.17045-17048>

Copyright: © Raja et al. 2020. Creative Commons Attribution 4.0 International License. JoTT allows unrestricted use, reproduction, and distribution of this article in any medium by providing adequate credit to the author(s) and the source of publication.

Funding: The first author acknowledge the Karnataka Biodiversity Board, Bangalore for the financial assistance.

Competing interests: The authors declare no competing interests.

Acknowledgements: The authors are grateful to the office of the PCCF and member secretary, Karnataka Biodiversity Board and deputy conservator of forest, range forest officers and other forest officials of Yadgiri, Ghataprabha and Kundapura forest divisions, Karnataka.



Euphorbiaceae***Euphorbia kadapensis*** Sarojin. & R.R.V. Raju

Phytotaxa 181(3): 179, ff. 1–2. 2014. (Image 1, 2)

Slender herb, erect–decumbent, 10–25 cm long. Stem terete, dichotomously branched, greenish-pink, glabrous–sparsely pubescent, nodes thickened, latex milky; stipules scaly, 1mm long, shortly laciniate. Leaves simple, opposite, oblong, 5–20 × 3.5–9.5 mm, base oblique, apex obtusely acute, margins distantly serrulate, apiculate, glabrous, glaucous beneath, mid-nerve prominent, lateral nerves 4–7 pairs. Petioles 1–1.5 mm long. Cyathia terminal and subterminal. Involucre turbinate, ca 4 × 2 mm, glabrous; lobes 5, laciniate; glands 4, yellow, appendages of glands 2 × 2 mm, white–pink. Pistillate flowers 5.5 × 3.0 mm, glabrous, pedicel 2.5–3 mm long; pistil tricarpeal; style 3, free from base, 2mm long; stigma simple. Fruiting pedicel pendulous. Capsule trigonus, glabrous, 3–4 mm long; seeds 3, brownish, 2 × 1.5 mm, oblong–ovate, tetragonal, transversely ridged, truncate at base,

Specimens Examined: Karnataka: Yadgiri District, Royangole, 16.280°N & 76.393°E, 484m, 01.ix.2017, P.

Raja 2586. Belagavi District, Midukanatti, 16.022°N & 74.768°E at 742m, 07.x.2017, P. Raja 2407.

Flowering & Fruiting: September to November.

Habitat & Ecology: This species is located at dry deciduous forests and are associated with *Dodonaea viscosa* (L.) Jacq., *Mundulea sericea* (Willd.) A.Chev., *Cyanotis tuberosa* (Roxb.) Schult. & Schult.f., *Phyllanthus maderaspatensis* L. and *Oropetium thomaeum* (L.f.) Trin.

Distribution: Endemic to peninsular India previously known only from the Kadappa District of Andhra Pradesh. Now its distribution is extended up to Karnataka.

IUCN status: Not evaluated.

Acanthaceae***Lepidagathis keralensis*** Madhus. & N.P. Singh

Kew Bull. 47: 301, f.3. 1992. (Image 3)

Prostrate herb, rootstock woody. Stem quadrangular, much branched, rooting at nodes, glabrous. Leaves oblong–lanceolate, 10 × 3 mm, base acute, apex acute–acuminate, margins entire with purple, glabrous, nerves prominent, 3–4 pairs. Spikes 1–3, terminal, procumbent, 2cm long. Flowers pink with yellow palate, sessile, 1cm



© P. Raja

Image 1. *Euphorbia kadapensis* Sarojin. & R.R.V. Raju.



Department of Botany St. Joseph's College (Autonomous) Tiruchirappalli – 620 002, Tamil Nadu, India	
Flora of Karnataka	Date: 01.09.2017
Coll. No.: 2407	
Family: Euphorbiaceae	
Botanical Name: <i>Euphorbia kadapensis</i> Sarojin. & R.R.V. Raju	
Locality: Royangole, Yadgiri	
Habitat: Tropical Dry Deciduous Forest	
Altitude: 484 m	
Description: Slender herb. Stem dichotomously branched, latex milky. Cyathia terminal & subterminal. Involucres glands 4, yellow, appendages of glands white-pink. Capsule trigonus.	
Collector: P. Raja	

Image 2. Herbarium sheet of *Euphorbia kadapensis*.

Department of Botany St. Joseph's College (Autonomous) Tiruchirappalli – 620 002, Tamil Nadu, India	
Flora of Karnataka	Date: 25.03.2018
Coll. No.: 2529	
Family: Acanthaceae	
Botanical Name: <i>Lepidagathis keralensis</i> Madhus. & N.P. Singh	
Locality: Hiriadica, Udipi	
Habitat: Tropical Dry Evergreen Deciduous Forest	
Altitude: 37 m	
Description: Prostrate herb, rootstock woody. Stem quadrangular, prostrate, rooting at nodes. Spike 1-3, 2 cm long. Flowers sessile, lower lip of corolla 3-lobed, pink with yellow palate.	
Collector: P. Raja	

Image 2. Herbarium sheet of *Lepidagathis keralensis*.

long; sterile bracts many, oblong-lanceolate, 10–13 × 3.5–4.0 mm, densely pubescent, 5-nerved, sharply pointed mucronate at apex, ca 1.5mm long, persistent. Calyx deeply 5-lobed; lobes unequal, 8–8.5 × 2–2.5 mm, persistent, similar to bracts, villous. Corolla 8.5–10.0 mm long, densely pubescent in bud, tube cylindric below, ca 3mm long, 2-lipped; upper lip 2-lobed, erect or reflexed; lower lip 3-lobed. Stamens 4, didynamous, ca 6 mm long, sparsely hairy, anthers 2-celled, 1.5–2.0 mm long, pubescent. Disc annular. Pistil ca 8 mm long; ovary subglobose-ovoid, 1.5–2.0 mm long, 2-celled, glabrous, ovules 2; style slender, 6.5–8.0 mm long, pubescent at lower ventral region with glands; stigma capitate, slightly bifid. Capsule compressed, ca 6mm long, glabrous; seeds 2, flat, soft, pubescent with white aril.

Specimens examined: Karnataka, Udipi District, Hiriadica, 13.303°N & 74.855°E at 37m, 25 March 2018, P. Raja, 2529.

Flowering & Fruiting: February to April.

Habitat & Ecology: This species is found growing in open places at the forest border, with *Naregamia*

alata Wight & Arn., *Ixora coccinea* L., and *Canthium coromandelicum* (Burm.f.) Alston.

Distribution: Endemic to peninsular India in the western coast of Kerala and Karnataka at low elevations.

IUCN status: Not evaluated

References

- Binojkumar, M.S. & N.P. Balakrishnan (2010). *The genus Euphorbia (L.) Euphorbiaceae in India, a taxonomic revision*. Bishen Singh Mahendra Pal Singh, Dehra Dun, 430pp.
- Binojkumar, M.S. & N.P. Balakrishnan (2012). Tribe Euphorbieae, pp. 270–340. In: Balakrishnan, N.P., T. Chakrabarthy, M. Sanjappa, P. Lakshminarasimhan & P. Singh (eds.). *Flora of India* Volume 23. Botanical Survey of India, Kolkata, 558pp.
- Mabberley, D.J. (2017). *Mabberley's Plant Book: A portable dictionary of plants, their classification, and uses*. Fourth Edition. Cambridge University Press, UK, 1102pp.
- Madhusoodanan, P.V. & N.P. Singh (1992). A New Species of *Lepidagathis* (Acanthaceae) from South India. *Kew Bulletin* 47(2): 301–303.
- Malpure, N.V., A.N. Chandore & S.R. Yadav (2016). *Euphorbia gokakensis* (Euphorbiaceae) from sandstone formations in Karnataka, India. *Nordic Journal of Botany* 34(3): 380–383. <https://doi.org/10.1111/njb.00997>
- Nayar, T.S., A.R. Beegam & M. Sibi (2014). *Flowering Plants of the Western Ghats, India*. Vol. 1. Dicots. Jawaharlal Nehru Tropical

Botanic Garden and Research Institute, Thiruvananthapuram, 35–38pp.

Prasad, K. & P.V. Prasanna (2016). *Euphorbia seshachalamensis* (Euphorbiaceae) a new species from Andhra Pradesh, India. *Annales of Botanici Fennici* 53(1–2): 73–76. <https://doi.org/10.5735/085.053.0214>

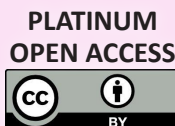
Sarojinidevi, N. & R. Reddyvenkatraju (2014). *Euphorbia kadapensis* (Euphorbiaceae), a new species from southern India. *Phytotaxa* 181(3): 179–183. <http://doi.org/10.11646/phytotaxa.181.3.6>

Singh, P., K. Karthigeyan, P. Lakshminarasimhan & S.S. Dash (2015). *Endemic Vascular Plants of India*. Botanical Survey of India, Kolkata, 339pp.





www.threatenedtaxa.org



The Journal of Threatened Taxa (JoTT) is dedicated to building evidence for conservation globally by publishing peer-reviewed articles online every month at a reasonably rapid rate at www.threatenedtaxa.org. All articles published in JoTT are registered under [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/) unless otherwise mentioned. JoTT allows unrestricted use, reproduction, and distribution of articles in any medium by providing adequate credit to the author(s) and the source of publication.

ISSN 0974-7907 (Online) | ISSN 0974-7893 (Print)

October 2020 | Vol. 12 | No. 14 | Pages: 16927–17062

Date of Publication: 26 October 2020 (Online & Print)

DOI: 10.11609/jott.2020.12.14.16927-17062

Article

Elevational pattern and seasonality of avian diversity in Kaligandaki River Basin, central Himalaya

– Juna Neupane, Laxman Khanal, Basant Gyawali & Mukesh Kumar Chalise, Pp. 16927–16943

Communications

A highway to hell: a proposed, inessential, 6-lane highway (NH173) that threatens the forest and wildlife corridors of the Western Ghats, India

– H.S. Sathya Chandra Sagar & Mrunmayee, Pp. 16944–16953

Species diversity and feeding guilds of birds in Malaysian agarwood plantations

– Nor Nasibah Mohd Jamil, Husni Ibrahim, Haniza Hanim Mohd Zain & Nur Hidayat Che Musa, Pp. 16954–16961

Evaluating performance of four species distribution models using Blue-tailed Green Darner *Anax guttatus* (Insecta: Odonata) as model organism from the Gangetic riparian zone

– Kritish De, S. Zeeshan Ali, Niladri Dasgupta, Virendra Prasad Uniyal, Jeyaraj Antony Johnson & Syed Ainul Hussain, Pp. 16962–16970

Butterfly species richness and diversity in rural and urban areas of Sirajganj, Bangladesh

– Sheikh Muhammad Shaburul Imam, Amit Kumer Neogi, M. Ziaur Rahman & M. Sabbir Hasan, Pp. 16971–16978

Chroococcalean blue green algae from the paddy fields of Satara District, Maharashtra, India

– Sharada Jagannath Ghadage & Vaneeta Chandrashekhar Karande, Pp. 16979–16992

Short Communications

Avifaunal diversity along the riverine habitats of Papikonda National Park, Andhra Pradesh, India

– Paromita Ray, Giridhar Malla, Upma Manral, J.A. Johnson & K. Sivakumar, Pp. 16993–16999

Medetomidine may cause heart murmur in Cougars and Jaguars: case report

– Thiago Cavalheri Luczinski, Gediendson Ribeiro de Araújo, Matheus Folgareini Silveira, Murillo Dapará Kirnew, Roberto Andres Navarrete, Jorge Aparecido Salomão-Jr, Letícia Alecho Requena, Jairo Antonio Melo dos Santos, Marcell Hideki Koshiyama, Cristiane Schilbach Pizzutto & Pedro Nacib Jorge-Neto, Pp. 17000–17002

Description of a new species of *Omyomymar* Schauff from India with a key to Oriental species and first report of *Palaeoneura markhoddlei* Triapitsyn (Hymenoptera: Mymaridae) from the Indian subcontinent

– H. Sankararaman & S. Manickavasagam, Pp. 17003–17008

Incursion of the killer sponge *Terpios hoshinota* Rützler & Muzik, 1993 on the coral reefs of the Lakshadweep archipelago, Arabian Sea

– Rocktim Ramen Das, Chemmencheri Ramakrishnan Sreeraj, Gopi Mohan, Kottarathil Rajendran Abhilash, Vijay Kumar Deepak Samuel, Purvaja Ramchandran & Ramesh Ramchandran, Pp. 17009–17013

Contribution to the macromycetes of West Bengal, India: 63–68

– Rituparna Saha, Debal Ray, Anirban Roy & Krishnendu Acharya, Pp. 17014–17023

Notes

A rare camera trap record of the Hispid Hare *Caprolagus hispidus* from Dudhwa Tiger Reserve, Terai Arc Landscape, India

– Sankarshan Rastogi, Ram Kumar Raj & Brides Kumar Chauhan, Pp. 17024–17027

First distributional record of the Lesser Adjutant *Leptoptilos javanicus* Horsfield, 1821 (Ciconiiformes: Ciconiidae) from Sindhuli District, Nepal

– Badri Baral, Sudeep Bhandari, Saroj Koirala, Parashuram Bhandari, Ganesh Magar, Dipak Raj Basnet, Jeevan Rai & Hem Sagar Baral, Pp. 17028–17031

First record of African Sailfin Flying Fish *Parexocoetus mento* (Valenciennes, 1847) (Beloniformes: Exocoetidae), from the waters off Andaman Islands, India

– Y. Gladston, S.M. Ajina, J. Praveenraj, R. Kiruba-Sankar, K.K. Bineesh & S. Dam Roy, Pp. 17032–17035

A first distribution record of the Indian Peacock Softshell Turtle *Nilssonina hurum* (Gray, 1830) (Reptilia: Testudines: Trionychidae) from Mizoram, India

– Gospel Zothanmawia Hmar, Lalbiakzuala, Lalmuansanga, Dadina Zote, Vanlalhrauaia, Hmar Betlu Ramengmawii, Kulendra Chandra Das & Hmar Tlawmtle Lalremsanga, Pp. 17036–17040

A frog that eats foam: predation on the nest of *Polypedates* sp. (Rhacophoridae) by *Euphylyctis* sp. (Dicroglossidae)

– Pranoy Kishore Borah, Avrajjal Ghosh, Bikash Sahoo & Aniruddha Datta-Roy, Pp. 17041–17044

New distribution record of two endemic plant species, *Euphorbia kadapensis* Sarojin. & R.R.V. Raju (Euphorbiaceae) and *Lepidagathis keralensis* Madhus. & N.P. Singh (Acanthaceae), for Karnataka, India

– P. Raja, N. Dhatchanamoorthy, S. Soosairaj & P. Jansirani, Pp. 17045–17048

Cirsium wallichii DC. (Asteraceae): a key nectar source of butterflies

– Bitupan Boruah, Amit Kumar & Abhijit Das, Pp. 17049–17056

Hypocoum pendulum L. (Papaveraceae: Ranunculales): a new record for the flora of Haryana, India

– Naina Palria, Nidhan Singh & Bhoo Dev Vashistha, Pp. 17057–17059

Addendum

Erratum and addenda to the article 'A history of primatology in India'

– Mewa Singh, Mridula Singh, Honnavalli N. Kumara, Dilip Chetry & Santanu Mahato, Pp. 17060–17062

Member



Publisher & Host

