

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](http://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](http://www.threatenedtaxa.org)

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

### NOTE

### REINSTATEMENT OF *PIMPINELLA KATRAJENSIS* R.S.RAO & HEMADRI (APIACEAE), AN ENDEMIC SPECIES TO MAHARASHTRA WITH NOTES ON ITS TAXONOMY AND DISTRIBUTION

S.M. Deshpande, S.D. Kulkarni, R.B. More & K.V.C. Gosavi

26 August 2020 | Vol. 12 | No. 11 | Pages: 16641–16643

DOI: 10.11609/jott.5163.12.11.16641-16643



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](mailto: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







## Reinstatement of *Pimpinella katrajensis* R.S.Rao & Hemadri (Apiaceae), an endemic species to Maharashtra with notes on its taxonomy and distribution

S.M. Deshpande<sup>1</sup> , S.D. Kulkarni<sup>2</sup> , R.B. More<sup>3</sup> & K.V.C. Gosavi<sup>4</sup>

<sup>1,2,3</sup>Yashavantrao Chavan Institute of Science, Sadar Bazar, Camp, Satara, Maharashtra 415001, India.

<sup>4</sup>HPT Arts & RYK Science College, Sharanpur Road, Prin.T A Kulkarni, Vidya Nagar, Nashik, Maharashtra 422005, India.

<sup>1</sup>deshpandeswapnaja85@gmail.com (corresponding author), <sup>2</sup>sagardkulkarni3@gmail.com, <sup>3</sup>rajmore.44@rediffmail.com,

<sup>4</sup>kumarvinodgosavi@gmail.com

*Pimpinella* L. is one of the largest genus of the subfamily Apioideae (Family: Apiaceae) having 200 species, distributed in Asia, Europe, and Africa (Mabberly 2008). Only a few species of the genus are reported from South America and one occurs in North America (Pimenov & Leonov 1993). In India, the genus is most speciose by having about 20 species (Mukherjee & Constance 1993).

De Candole (1827) divided the genus *Pimpinella* into three sections: *Tragoselinum*, characterized by its glabrous fruits and perennial roots; *Tragium*, with hairy fruits, perennial (rarely biennial) roots and pinnate to bipinnate radical leaves with ovate segments; and *Anisum*, which included species with down-covered annual fruits. Bentham & Hooker (1867) reported 65–70 species of the genus *Pimpinella* and classified it into six sections according to the habitat of the plant, leaf & fruit morphology, and petal colour. *Pimpinella* can be distinguished from other genera by mainly perennial herbs, cordate-ovoid or oblong-ovoid, slightly laterally compressed fruits constricted at their commissures, each with five filiform ribs (Pu & Watson 2005).

During floristic survey of Satara District of Maharashtra State, some specimens belonging to the

genus *Pimpinella* were collected from Ajinkyatara Fort. Initially, we identified the unknown *Pimpinella* species as *P. wallichiana* Gandhi. But after critical examination of specimens through perusal of literature (Hooker 1879; Rao & Hemadri 1976) and consultation of type and other specimen from BSI and SUK the specimens were identified as *Pimpinella katrajensis* Rolla Rao & Hemadri.

Mukherjee & Constance (1993) subsumed *P. katrajensis* into *P. wallichiana* without any reason while Almeida (1998) treated it as a variety of *P. wallichiana* based on leaf characters; however, both species are very distinct (Table 1). Thus, in this communication we have provided morphological description, images, and distinguishing characters of *P. katrajensis* for correct identification and distribution note in Maharashtra State as also help resolve the name on the PlantList.

### *Pimpinella katrajensis* Rolla Rao & Hemadri

Indian Forester 102(4): 232–234; 1976. (Image 1)

Perennial erect aromatic herbs; root fusiform, about 10cm long; stem terete striate, pubescent to glabrous, leaves pinnately trifoliate, petiole 12–15 cm long, sheathing at base, puberulous, ovate-orbulate, cordate to truncate, acute at apex, margins coarsely

**Editor:** Mandar N. Datar, MACS-Agharkar Research Institute, Pune, India.

**Date of publication:** 26 August 2020 (online & print)

**Citation:** Deshpande, S.M., S.D. Kulkarni, R.B. More & K.V.C. Gosavi (2020). Reinstatement of *Pimpinella katrajensis* R.S.Rao & Hemadri (Apiaceae), an endemic species to Maharashtra with notes on its taxonomy and distribution. *Journal of Threatened Taxa* 12(11): 16641–16643. <https://doi.org/10.11609/jott.5163.12.11.16641-16643>

**Copyright:** © Deshpande 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:** Self-funded.

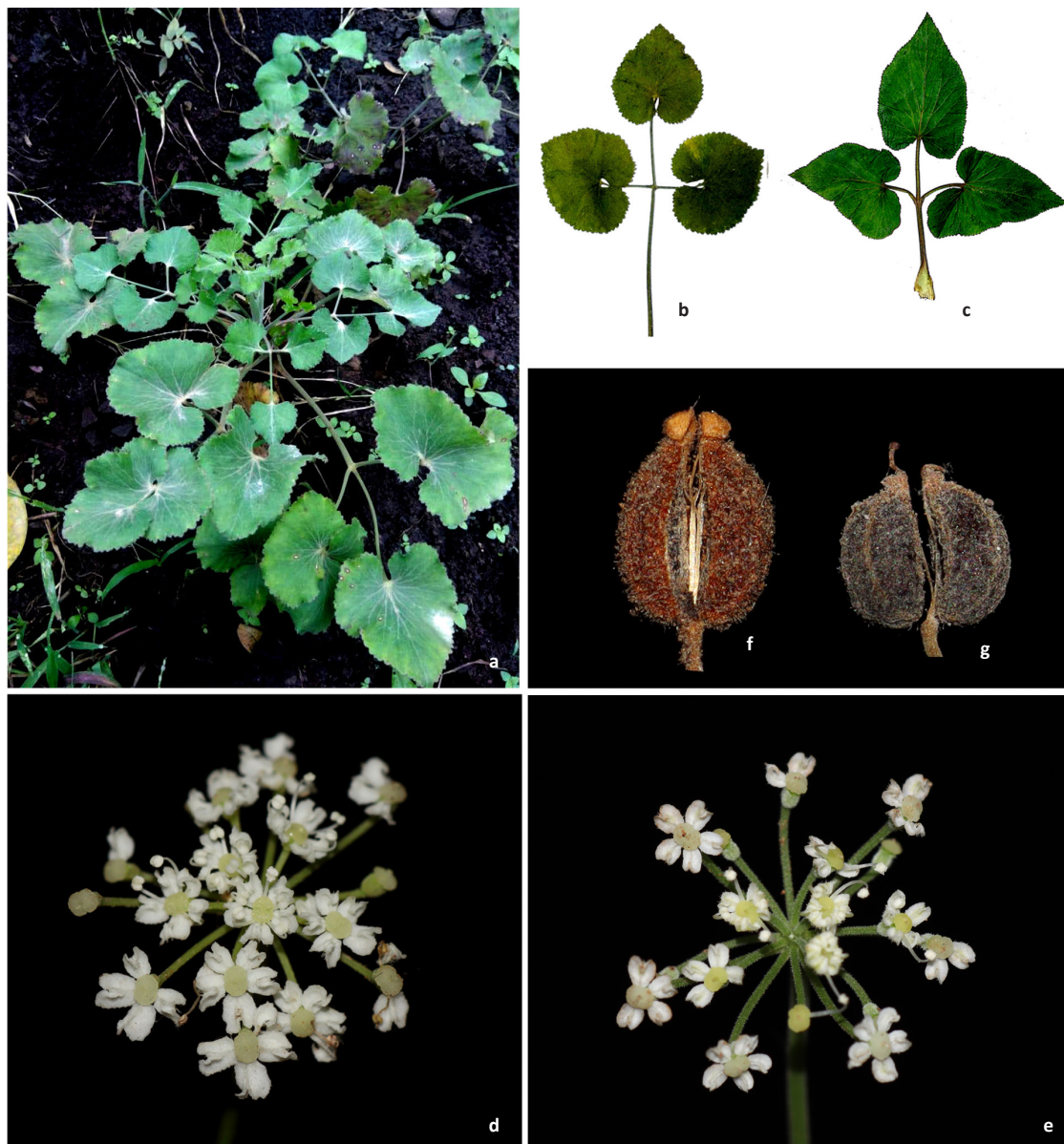
**Competing interests:** The authors declare no competing interests.

**Acknowledgements:** Authors are thankful to the director, Botanical Survey of India; Dr. P. Lakshminarasimhan and Prof. S.R. Yadav, Department of Botany, Shivaji University, Kolhapur for permitting the herbarium consultation facilities in BSI and SUK, respectively; the director, Y.C. Institute of Science, Satara; head, Department of Botany & Zoology, Y.C. Institute of Science, Satara; and the principal HPT Arts & RYK Science College, Nashik.



**Table 1. Distinguishing characters between *Pimpinella katrajensis* and *P. wallichiana***

| Characters                    | <i>P. katrajensis</i>                | <i>P. wallichiana</i>              |
|-------------------------------|--------------------------------------|------------------------------------|
| Stem                          | White tomentose                      | Glabrous to sparsely hairy         |
| Upper leaf                    | Tomentose, trifid                    | Glabrous, many dissected lobes     |
| Basal leaflet margin          | Crenate to crenulated                | Serrate                            |
| Basal lateral leaflet base    | Not oblique                          | Oblique                            |
| Bracts and bracteoles         | Absent                               | Present, caducous                  |
| Rays                          | Tomentose                            | Glabrous to sparsely hairy         |
| Ovary                         | Covered with white tomentose         | Covered with hyaline tubercles     |
| Fruit                         | Oblong, 2.2–3 mm long                | Orbicular to oblong, 1.8–2 mm long |
| Out growth on fruit epidermis | Yellow pointed hairs with thick base | Hyaline tubercles present          |



**Image 1. Comparison between *Pimpinella katrajensis* Rolla Rao & Hemadri and *P. wallichiana* Gandhi: *P. katrajensis*: a—Habit, b—Leaf, d—Umbellets and f—fruit; *P. wallichiana*: c—Leaf, e—Umbellets and g—fruit. © K.V.C. Gosavi & S.D. Kulkarni.**



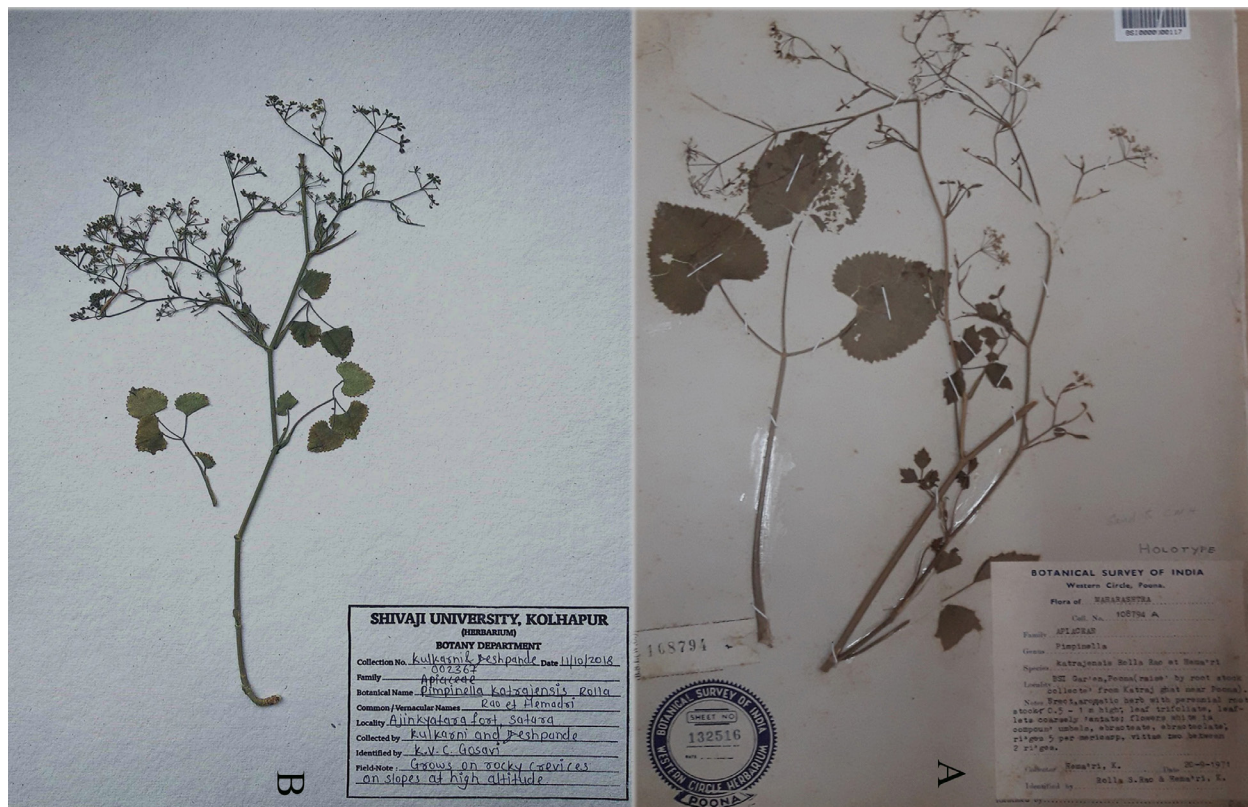


Image 2. A. Holotype - *Pimpinella katrajensis* Rolla Rao & Hemadri.

toothed and cartilaginous, lower surface minutely pubescent, sparsely pubescent on upper surface; uppermost leaves smaller. Inflorescences terminal compound umbels, large, tall, bisexual, puberulous, primary rays c. 5cm long, secondary rays 6–7 in number, 1–2.5 cm, long, puberulous, ebracteate. Flowers 6–15 per umbel, ebracteolate, unequal pedicellate, pedicels pubescent. Calyx teeth not distinguished. Corolla white, hairy outside, petals 5, broadly ovate, with notch at tip, stamens 5, anthers 0.3–0.4 mm long. Stylopodium distinct, conical shaped, styles very short. Fruit laterally compressed, ovoid, 2.2–3 mm long, pubescent to tomentose. Carpophore bifid.

Flowering & fruiting: September–December.

Habitat: Grows on rocky crevices on slopes at high altitude.

Distribution note: *Pimpinella katrajensis* is endemic to Maharashtra and only reported from two localities, Katraj Ghat near Pune and Pachgani in Satara District, however it is also distributed at Ajinkyatara, Vasota, Ambedare and Pateshwar in Satara District.

Specimens examined: K. 108794 (BSI) (holotype), 20.ix.1971, Katraj Ghat, Pune District, Maharashtra,

India, coll. Hemadri (Image 2A; 002367 (NGCPR, SUK), 11.x.2018, Ajinkyatara Fort, Satara District, Maharashtra, India, coll. S.D Kulkarni & S.M. Deshpande (Image 2B).

## References

- Almeida, M.R. (1998). *Flora of Maharashtra Vol. II* Orient Press, Mumbai, 360pp.
- Bentham, G. & J.D. Hooker (1867). *Genera plantarum: Umbelliferae*. Reeve & Co., London, 859–931pp.
- De Candolle, A.P. (1827). *Dictionnaire classique d'histoire naturelle* 11. Rey et Gravier, Libraries-Editeurs (Ed.) 406.
- Hooker, J.D. & C.B. Clarke (1879). *Umbelliferae: Flora of British India*. Vol. 2 L. Reeve. London, 687pp.
- Mabberley, D.J. (2008). *Mabberley's Plant Book: A Portable Dictionary of Plants, their Classification and Uses*. 3<sup>rd</sup> edition. Cambridge University Press, 1021pp.
- Mukherjee, P.K. & L. Constance. (1993). *Umbelliferae (Apiaceae) of India*. Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi, 137–155pp.
- Pimenov, M.G. & M.V. Leonov (1993). *The genera of the Umbelliferae: a nomenclator*. Royal Botanic Gardens, Kew and Botanical Garden of Moscow University, Russia, 156pp.
- Pu, F.T. & M.F. Watson (2005). *Pimpinella* L., pp. 93–104. In: Wu, Z.Y. & P.H. Raven (eds.). *Flora of China*. Vol. 14. Science Press, Missouri Botanic Gardens Press, 517pp.
- Rolla, S.R. & K. Hemadri (1976). *Pimpinella katrajensis* Rolla Rao et Hemadri - a new species of Apiaceae from the sahyadri ranges Maharashtra state. *Indian Forester* 102(4): 232.



PLATINUM  
OPEN ACCESS



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](http://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)

August 2020 | Vol. 12 | No. 11 | Pages: 16407–16646

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

DOI: 10.11609/jott.2020.12.11.16407-16646

[www.threatenedtaxa.org](http://www.threatenedtaxa.org)

#### Article

**Use of an embedded fruit by Nicobar Long-tailed Macaque *Macaca fascicularis umbrosus*: II. Demographic influences on choices of coconuts *Cocos nucifera* and pattern of forays to palm plantations**

– Sayantan Das, Rebekah C. David, Ashvita Anand, Saurav Harikumar, Rubina Rajan & Mewa Singh, Pp. 16407–16423

#### Communications

**Habitat preference and current distribution of Chinese Pangolin (*Manis pentadactyla* L. 1758) in Dorokha Dungkhag, Samtse, southern Bhutan**

– Dago Dorji, Jambay, Ju Lian Chong & Tshering Dorji, Pp. 16424–16433

**A checklist of mammals with historical records from Darjeeling-Sikkim Himalaya landscape, India**

– Thangsuanlian Naulak & Sunita Pradhan, Pp. 16434–16459

**Golden Jackal *Canis aureus* Linnaeus, 1758 (Mammalia: Carnivora: Canidae) distribution pattern and feeding at Point Calimere Wildlife Sanctuary, India**

– Nagarajan Baskaran, Ganesan Karthikeyan & Kamaraj Ramkumaran, Pp. 16460–16468

**Suppression of ovarian activity in a captive African Lion *Panthera leo* after deslorelin treatment**

– Daniela Paes de Almeida Ferreira Braga, Cristiane Schilbach Pizzutto, Derek Andrew Rosenfield, Priscila Viau Furtado, Cláudio A. Oliveira, Sandra Helena Ramiro Corrêa, Pedro Nacib Jorge-Neto & Marcelo Alcindo de Barros Vaz Guimarães, Pp. 16469–16477

**Spatial aggregation and specificity of incidents with wildlife make tea plantations in southern India potential buffers with protected areas**

– Tamanna Kalam, Tejesvini A. Puttaveeraswamy, Rajeev K. Srivastava, Jean-Philippe Puyravaud & Priya Davidar, Pp. 16478–16493

**Innovative way of human-elephant competition mitigation**

– Sanjit Kumar Saha, Pp. 16494–16501

**New locality records and call description of the Resplendent Shrub Frog *Raorchestes resplendens* (Amphibia: Anura: Rhacophoridae) from the Western Ghats, India**

– Sandeep Das, K.P. Rajkumar, K.A. Sreejith, M. Royaltata & P.S. Easa, Pp. 16502–16509

**First record of a morphologically abnormal and highly metal-contaminated Spotback Skate *Atlantoraja castelnaui* (Rajiformes: Arhynchobatidae) from southeastern Rio de Janeiro, Brazil**

– Rachel Ann Hauser-Davis, Márcio L.V. Barbosa-Filho, Lucia Helena S. de S. Pereira, Catarina A. Lopes, Sérgio C. Moreira, Rafael C.C. Rocha, Tatiana D. Saint’Pierre, Paula Baldassin & Salvatore Siciliano, Pp. 16510–16520

**Butterfly diversity in an organic tea estate of Darjeeling Hills, eastern Himalaya, India**

– Aditya Pradhan & Sarala Khaling, Pp. 16521–16530

**Freshwater decapods (Crustacea: Decapoda) of Palair Reservoir, Telangana, India**

– Sudipta Mandal, Deepa Jaiswal, A. Narahari & C. Shiva Shankar, Pp. 16531–16547

**Diversity and distribution of figs in Tripura with four new additional records**

– Smita Debbarma, Biplab Banik, Biswajit Baishnab, B.K. Datta & Koushik Majumdar, Pp. 16548–16570

#### Member



#### Short Communications

**Open garbage dumps near protected areas in Uttarakhand: an emerging threat to Asian Elephants in the Shivalik Elephant Reserve**

– Kanchan Puri, Ritesh Joshi & Vaibhav Singh, Pp. 16571–16575

**A preliminary checklist of spiders (Araneae: Arachnida) in Jambughoda Wildlife Sanctuary, Panchmahal District, Gujarat, India**

– Reshma Solanki, Manju Siliwal & Dolly Kumar, Pp. 16576–16596

**Preliminary checklist of spider fauna (Araneae: Arachnida) of Chandranath Hill, Goa, India**

– Rupali Pandit & Mangirish Dharwadkar, Pp. 16597–16606

**Butterfly (Lepidoptera: Rhopalocera) fauna of Jabalpur City, Madhya Pradesh, India**

– Jagat S. Flora, Ashish D. Tiple, Ashok Sengupta & Sonali V. Padwad, Pp. 16607–16613

**Evaluating threats and conservation status of South African *Aloe***

– Samuel O. Bamigboye, Pp. 16614–16619

#### Notes

**The first record of Montagu’s Harrier *Circus pygargus* (Aves: Accipitridae) in West Bengal, India**

– Suman Pratihari & Niloy Mandal, Pp. 16620–16621

**An account of snake specimens in St. Joseph’s College Museum Kozhikode, India, with data on species diversity**

– V.J. Zacharias & Bobby Jose, Pp. 16622–16627

**Notes on the occurrence of a rare pufferfish, *Chelonodontops leopardus* (Day, 1878) (Tetraodontiformes: Tetraodontidae), in the freshwaters of Payaswini River, Karnataka, India**

– Priyanka Chakraborty, Subhrendu Sekhar Mishra & Kranti Yardi, Pp. 16628–16631

**New records of hoverflies of the genus *Volucella* Geoffroy (Diptera: Syrphidae) from Pakistan along with a checklist of known species**

– Muhammad Asghar Hassan, Imran Bodlah, Anjum Shehzad & Noor Fatima, Pp. 16632–16635

**A new species of *Dillenia* (Angiosperms: Dilleniaceae) from the Eastern Ghats of Andhra Pradesh, India**

– J. Swamy, L. Rasingam, S. Nagaraju & Pooja R. Mane, Pp. 16636–16640

**Reinstatement of *Pimpinella katrajensis* R.S.Rao & Hemadri (Apiaceae), an endemic species to Maharashtra with notes on its taxonomy and distribution**

– S.M. Deshpande, S.D. Kulkarni, R.B. More & K.V.C. Gosavi, Pp. 16641–16643

***Puccinia duthiei* Ellis & Tracy: a new host record on *Chrysopogon velutinus* from India**

– Suhas Kundlik Kamble, Pp. 16644–16646

Publisher & Host

