



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)

SHORT COMMUNICATION

THIRTY-NINE NEWLY DOCUMENTED PLANT SPECIES OF GREAT NICOBAR, INDIA

Kanakasabapathi Pradheep, Kattukkunnel Joseph John, Iyyappan Jaisankar & Sudhir Pal Ahlawat

26 May 2020 | Vol. 12 | No. 8 | Pages: 15936–15944

DOI: [10.11609/jott.5374.12.8.15936-15944](https://doi.org/10.11609/jott.5374.12.8.15936-15944)



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





Thirty-nine newly documented plant species of Great Nicobar, India

Kanakasabapathi Pradheep¹, Kattukkunnel Joseph John², Iyyappan Jaisankar³
& Sudhir Pal Ahlawat⁴

^{1,4} Division of Plant Exploration and Germplasm Collection, ICAR-National Bureau of Plant Genetic Resources (ICAR-NBPGR), Pusa Campus, New Delhi 110012, India.

²ICAR-NBPGR, Regional Station, KAU P.O., Thrissur, Kerala 680656, India.

³ICAR-Central Island Agricultural Research Institute, Port Blair, Andaman & Nicobar Islands 744101, India.

¹K.Pradheep@icar.gov.in (corresponding author), ²Joseph.K@icar.gov.in, ³ijaisankar@yahoo.com, ⁴Sudhir.Ahlawat@icar.gov.in

Abstract: A constituent of the Sundaland Biodiversity Hotspot, Great Nicobar in the Nicobar group of islands, India, is known for rich floristic diversity. As this geographically distinct and southernmost island of India has not been surveyed for plant genetic resources, three survey-cum-exploration trips were undertaken during 2017–2019 to make an inventory of the taxa of importance for food and agriculture, besides their collection for ex situ conservation. These surveys revealed the new distribution of 39 taxa (belonging to 37 genera, 24 families) in this island, including 14 new to the Nicobar group of islands and one to Andaman & Nicobar Islands. Among the 39 taxa, 16 have the importance of being wild relatives of 15 crop species. Fourteen species are classified as naturalized ones (including four globally recognized invasive species); some of them pose potential threat to the ecosystem of this fragile island. Detailed field studies in this remote island will help in better understanding of phytogeography in general and impact of alien species on native plant diversity in particular.

Keywords: Andaman & Nicobar, India, invasive species, new distribution record, Nicobar Islands, plant genetic resources, wild species

Abbreviations: BSI—Botanical Survey of India | PGR—Plant Genetic Resources | ICAR-CIARI—ICAR-Central Island Agricultural Research Institute | ICAR-NBPGR—ICAR-National Bureau of Plant Genetic Resources | ILDIS—International Legume Database and Information Service | NHCP—National Herbarium of Cultivated Plants.

The Great Nicobar Island constitutes the southernmost landmass of India located in the Andaman & Nicobar Archipelago, covering an area of 1,045km². It is located at 6.75–7.25 N & 93.61–93.93 E, about 482km south of Port Blair and about 145km north of Sumatra (Indonesia). A constituent of the Sundaland Biodiversity Hotspot, this island experiences humid tropical climate with mean annual temperature of 22–32°C, relative humidity of 82% and rainfall of 3,000–3,800 mm. Rich and unique biodiversity in this island and the need to protect the ethnic tribe (Shompen) made the Ministry of Environment and Forests declare its 85% area as a biosphere reserve in 1989 (Sinha 1999; Gupta et al. 2004). Dense tropical forests, rugged hills, and narrow & flat coastlines are the common features of this island. Major forest types are littoral forests, mangrove forests, lowland swamp forests, mixed evergreen forests (at low altitudes), and evergreen hill forests (high hills, up to 670m at the zenith of Mt Thullier); such a wide range of habitats contributed to the richness of species diversity. By virtue of its location in the tropical Indo-Malayan biotic zone, this island shares phytogeographic affinity with both Malayan and peninsular Indian elements,

Editor: B. Ravi Prasad Rao, Sri Krishnadevaraya University, Ananthapuramu, India.

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

Citation: Pradheep, K., K.J. John, I. Jaisankar & S.P. Ahlawat (2020). Thirty-nine newly documented plant species of Great Nicobar. *Journal of Threatened Taxa* 12(8): 15936–15944. <https://doi.org/10.11609/jott.5374.12.8.15936-15944>

Copyright: © Pradheep 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: ICAR-NBPGR, New Delhi.

Competing interests: The authors declare no competing interests.

Acknowledgements: Authors acknowledge the director, ICAR-NBPGR for the support; deputy director, BSI Andaman & Nicobar Regional Centre, Port Blair for permitting for herbarium study; officials of forest department, Port Blair for granting permission for exploration and germplasm collection from Great Nicobar Biosphere Reserve; and the officials of Agriculture Department, Campbell Bay for logistic support.



besides exhibiting rare and distinct flora of its own (Palni et al. 2012). According to Sinha (1999), out of a total of 648 plant species occurring on this island, 568 are angiosperms and 13.11% plants are endemic to the island; among the non-endemic plants, 32.25% are not found in mainland India but occur in southeastern Asia. Recently, Jayanthi (2017) reported 729 angiosperm taxa (557 dicots & 172 monocots) belonging to 458 genera and 109 families from the Campbell Bay National Park of Great Nicobar.

K.C. Sahni, the first botanist who explored and collected 180 species from this island since post-independence, aptly commented that “due to high degree of endemism in insular areas, several of the species in the present collection [mentioning about his botanical collection] are likely to be new and there is every reason to believe that future collectors will be amply rewarded by new and interesting types that might be of economic importance” (Sahni 1953). As he rightly predicted, about 729 angiosperm taxa have been reported from this pristine island (Jayanthi 2017), which comprised not less than 25 new taxa and several new distribution records for the flora of Andaman & Nicobar Islands and for the country as well, including species belonging to economically important genera—*Musa*, *Mangifera*, *Calamus*, *Jasminum*, *Dendrobium*, *Aerides*, and *Etilingera*. The Botanical Survey of India, Kolkata conducted several field trips in this biodiversity-rich island from 1960s onwards (Thothathri et al. 1973; Balakrishnan et al. 1989; Sinha 1999; Jayanthi 2017) and brought out several floristic novelties. In the Flora of Great Nicobar, Sinha (1999) mentioned that about 80% area of this island was extensively as well as intensively explored, while the remaining 20% area was inaccessible and unexplored, indicating the need for further systematic exploration. During our expedition aimed at collecting PGR of agri-horticultural importance, we came across many plant species hitherto not reported from this diversity-rich island, which forms the core of this communication.

MATERIALS AND METHODS

As a preparatory phase of the expedition, a preliminary study of herbarium collections of species of PGR value from Great Nicobar was made at the BSI Andaman & Nicobar Regional Centre, Port Blair (PBL). Three survey-cum-exploration trips mainly covering eastern and northern parts (Figure 1), were undertaken during March 2017, January 2018 & 2019, spanning over 45 working days. The first exploration was intended for capturing crop diversity of revenue/private land areas

while the second and third trips were meant exclusively for collecting PGR from forest areas. While herbarium vouchers were deposited in the NHCP at ICAR-NBPGR, New Delhi, germplasm collections (of taxa of PGR value) are being conserved in the form of seeds/live plants at ICAR-NBPGR, New Delhi/Thrissur and/or ICAR-CIARI, Port Blair. All the available literature was taken into account to ascertain new distribution status of particular taxa. For establishing their new occurrence in the Nicobar group of islands, literature like Alappatt (2017); ILDIS (2006); WCSP (2019); Pandey & Diwakar (2008) were cross-checked.

RESULTS AND DISCUSSION

PGR expedition in Great Nicobar revealed the distribution of 39 plant taxa belonging to 37 genera, 24 families so far not reported from this southernmost island of India (Image 1), including 14 new records to the Nicobar group of islands and one (*Dichondra micrantha* Urb.) to Andaman & Nicobar Islands. Table 1 listed these taxa along with locality/herbarium/germplasm collection details, distribution (India and world), habit, habitats, PGR value and other remarks. Herbs (19) predominate in the list, followed by climbers and shrubs (8 each) and trees (4). Perusal of 24 wild species newly documented from this island (taxa denoted with ‘a’ in Table 1) indicates their ecogeographic and phytogeographic affinities to Malesian as well as Indian elements.

Out of 39 taxa, 14 are naturalized species including four globally recognized invasive ones posing red alert to the ecosystem of this fragile island. About two-third of such naturalized species is originally native to tropical America. Increasing human activity, besides dispersal through ocean currents, wind, and birds, explains the species movement from adjoining islands and nearby mainlands (Mahanand et al. 2017). The naturalized species, *Hyptis capitata* Jacq., as documented by Sinha (1999) and Jayanthi (2017) has now become invasive. Species like *Canna indica* L., *Ceiba pentandra* (L.) Gaertn., and *Gliricidia sepium* (Jacq.) Walp. have escaped from cultivation, and will soon get naturalized. All these indicate that there is an urgent need for an ecological study on the impact of invasive and naturalized species over native plant diversity. Among the 39 taxa, 16 have importance as wild relatives of 15 crop species, including Black Pepper, Brinjal, Okra, Sugarcane, Kodo Millet, and Jute.

Dagar & Singh (1999) in their enumeration of plant wealth of the Andaman & Nicobar Islands did not specifically mention the occurrence of *Amaranthus spinosus* L., *Barleria prionitis* L., *Crotalaria pallida* Aiton,



Figure 1. Areas surveyed (in yellow spots) in Great Nicobar

Flemingia strobiliifera (L.) R.Br. ex W.T.Aiton, *Hyptis suaveolens* (L.) Poit., *Senna occidentalis* (L.) Link, *S. tora* (L.) Roxb., *Sida rhombifolia* L., and *Solanum nigrum* L. in Great Nicobar Island, which have now been collected. The contemporary floristic literature (Sinha 1999) and subsequent work (Jayanthi 2017), however, didn't mention the same.

Twenty years back, Sinha (1999) reported a rare occurrence of *Rhopaloblaste augusta* (Kurz) H.E.Moore, *Macaranga nicobarica* N.P.Balacr. & Chakrab., *Dioscorea glabra* Roxb., and *Garcinia nervosa* Miq., but we found good populations of these species, the former

two towards Galathea riverside and the latter two throughout. Further, he mentioned that *Mangifera nicobarica* Kosterm. had not been collected after its type (specimen) collection. We, however, found about 50 trees, especially along Galathea riverside and towards Mt Thullier. Our observation corroborates with Kothamsi et al. (1995), who mentioned a plant community of *Mangifera nicobarica-Terminalia bialata* at Galathea part. We confirm the occurrence of *Piper clypeatum* Wall., mentioned by Sinha (1999) as species of doubtful existence. Though observed (through photographic records), we refrain from reporting distribution of

Table 1. Angiosperm taxa recorded newly on Great Nicobar Island.

	Family	Taxon name	Locality & herbarium/ germplasm collection details	Distribution (India; World)	Habit	Habitat	PGR value & other remarks
1	Amaranthaceae	<i>Amaranthus hybridus</i> L. [†]	Campbell Bay 2762 (NHCP23123), 26.i.2018, Campbell Bay, Coll. K. Pradheep, K. Joseph John & I. Jaisankar.	Himalaya and southern Indian hills; native to Mexico and North America, now naturalized worldwide	Annual herb	Rare along roadsides	Wild relative of grain amaranth crops
2	Asteraceae	<i>Parthenium hysterophorus</i> L. ^c	Sastry Nagar to Galathea, Campbell Bay 2827, 14.i.2019, Campbell Bay, Coll. K. Pradheep, K. Joseph John & I. Jaisankar.	Throughout; native to tropical America, now pantropic	Annual herb	Rare weed as of now along roadsides	---
3	Boraginaceae	<i>Cordia dichotoma</i> G.Forst ^b	Campbell Bay, Joginder Nagar 2828, 14.i.2019, Campbell Bay, Coll. K. Pradheep, K. Joseph John & I. Jaisankar.	Throughout; tropical Asia, Australia and Pacific Islands	Small tree	Man-made roadside plantation; also self- sown	Minor fruit
4	Boraginaceae	<i>Ehretia microphylla</i> Lam. ^a	Campbell Bay, Sastry Nagar 2816, 14.i.2019, Campbell Bay, Coll. K. Pradheep, K. Joseph John & I. Jaisankar.	Peninsular India, Andaman Islands; Eastern & southeastern Asia and Australia	Shrub	Escaped from cultivation	Used as hedge; ornamental
5	Campanulaceae	<i>Hippobroma longiflora</i> (L.) G.Don ^b	Campbell Bay, Kamal Basti 2801, 16.i.2019, Kamal Basti, Coll. K. Pradheep, K. Joseph John & I. Jaisankar.	Andaman & Nicobar Islands; a native of Caribbean Islands, established as weed elsewhere	Herb	Roadside weed	Ornamental value
6	Clusiaceae	<i>Garcinia speciosa</i> Wall. ^{†*}	Afra Bay AJJPN/19-169 (live collection), 21.i.2019, Afra Bay.	Andaman & Nicobar Islands; Myanmar and Thailand	Large tree	Rare in littoral forests	Preferred edible fruit species, related to mangosteen
7	Convolvulaceae	<i>Dichondra micrantha</i> Urb. ^b	Campbell Bay 2795, 16.i.2019, Campbell Bay, Coll. K. Pradheep & K. Joseph John.	Tropical areas; North & South America, Pacific Islands, naturalized elsewhere	Prostrate herb	Lawn weed	New to Andaman & Nicobar Islands
8	Convolvulaceae	<i>Stictocardia tilifolia</i> (Desr.) Hallier f. ^{*,*} (Image 1A)	Galathea 2802, 12.i.2019, Galathea, Coll. K. Pradheep, K. Joseph John & I. Jaisankar.	Almost throughout; southern & southeastern Asia, Tropical America, Pacific Islands	Perennial climber	Seashore thickets and forests	Ornamental value
9	Cucurbitaceae	<i>Trichosanthes pilosa</i> Lour. (syn. <i>T. ovigera</i> Blume) ^{†*}	Sastry Nagar to Galathea, Afra Bay 2757 (NHCP23118), 19.i.2018, 14 Km from Campbell Bay to Kopenheat E-W road, Coll. K. Pradheep, K. Joseph John & I. Jaisankar; 2759 (NHCP23120), 17.i.2018, Galathea point, Coll. K. Pradheep, K. Joseph John & I. Jaisankar.	Andaman & Nicobar Islands, northeastern region, West Bengal and Andhra Pradesh; southern, eastern & southeastern Asia	Perennial climber	Occasional in thickets along with <i>Trichosanthes tricuspidata</i>	Young twigs are white- hairy
10	Cucurbitaceae	<i>Trichosanthes tricuspidata</i> Lour. ^a	Magar nullah, Chingwan, Sastry Nagar to Galathea 2755 (NHCP23116), 17.i.2018, Galathea (mouth point), Coll. K. Pradheep, K. Joseph John & I. Jaisankar.	Andaman & Nicobar Islands; southeastern Asia	Perennial climber	Rare along forest openings	---

	Family	Taxon name	Locality & herbarium/ germplasm collection details	Distribution (India; World)	Habit	Habitat	PGR value & other remarks
11	Dioscoreaceae	<i>Dioscorea bulbifera</i> L. ^{a†}	Navy Dera, 12–17 km on East-West Road, Govind Nagar, Galathea JP/17-23 (live collection), 05.iii.2017, Govind Nagar; JP/17-34 (live collection), 06.iii.2017, Vijay Nagar; JP/18-108 (live collection), 27.i.2018, 18 km from Campbell Bay to Kopenheat on E-W road.	Almost throughout; tropical and subtropical Asia & Africa	Climber	Occasional in inland as well as coastal areas	Cultivated elsewhere; wild form
12	Ebenaceae	<i>Diospyros undulata</i> Wall. ex G. Don ^a (Image 1B)	Chingwan 2794 (AJJPN/19-190), 25.i.2019, Chingwan, Coll. K. Pradheep, K. Joseph John.	Andaman & Nicobar Islands; Indo-China to peninsular Malaysia	Shrub	Rare in littoral forests	Edible fruit
13	Euphorbiaceae	<i>Ricinus communis</i> L. ^{b†}	Campbell Bay JP/17-06 (live collection), 04.iii.2017, Campbell Bay.	Throughout India; native to northeastern tropical Africa, naturalized elsewhere	Small shrub	Common in (human) disturbed areas	Oilseed value; weedy form
14	Fabaceae	<i>Calopogonium mucunoides</i> Desv. ^{b*}	Gandhi Nagar, Sastry Nagar 2488 (NHCP23110), 04.iii.2017, Joginder Nagar, Coll. K. Pradheep & K. Joseph John.	Kerala, Tamil Nadu, Karnataka, Odisha, Andaman Islands; native to tropical America, naturalized elsewhere	Twining or procumbent climber	Spreading fast in disturbed areas	Cover crop elsewhere
15	Fabaceae	<i>Crotalaria retusa</i> L. ^{a*}	Campbell Bay 2482 (NHCP23014), 08.iii.2017, Campbell Bay, Coll. K. Pradheep & K. Joseph John.	Throughout; tropical Asia, naturalized elsewhere	Erect herb	Rare on roadsides	---
16	Fabaceae	<i>Indigofera tinctoria</i> L. ^a	Joginder Nagar, Sastry Nagar JP/17-39 (IC623181; live collection; NHCP23001), 06.iii.2017, Sastry Nagar.	Throughout; tropical Asia & Africa	Highly branched subshrub	Rare on roadsides	Medicinal-cum-dye-yielding plant
17	Fabaceae	<i>Mimosa diplotricha</i> C. Wright ^{c*}	Joginder Nagar, Laxmi Nagar 2813, 12.i.2019, Laxmi Nagar, Coll. K. Pradheep, K. Joseph John & I. Jaisankar.	Karnataka, Kerala, Tamil Nadu; native to tropical America, naturalized elsewhere	Scandent herb	Occasional in thickets and field boundaries	---
18	Fabaceae	<i>Prosopis juliflora</i> (Sw.) DC. ^c	Campbell Bay, Joginder Nagar 2808, 16.i.2019, Campbell Bay, Coll. K. Pradheep, K. Joseph John & I. Jaisankar.	Almost throughout; native to Mexico and tropical America, naturalized elsewhere	Tree	Rare; now located only in two places	---
19	Fabaceae	<i>Pueraria phaseoloides</i> (Roxb.) Benth. var. <i>javanica</i> (Benth.) Baker ^{b*}	Almost all motorable areas 2485 (NHCP23016), 08.iii.2017, Sastry Nagar, Coll. K. Pradheep & K. Joseph John.	Kerala, Tamil Nadu, Uttar Pradesh, Andaman Islands; southeastern Asia	Climber	Very common along thickets	Introduced cover crop
20	Fabaceae	<i>Senna hirsuta</i> (L.) H.S. Irwin & Barneby ^{b*}	Campbell Bay 2823, 14.i.2019, Campbell Bay, Coll. K. Pradheep, K. Joseph John & I. Jaisankar.	Throughout; native to tropical America, naturalized elsewhere	Erect subshrub	Rare in disturbed areas	---
21	Fabaceae	<i>Smithia sensitiva</i> Aiton ^a	Gandhi Nagar 2788, 12.1.2019, Gandhi Nagar, Coll. K. Pradheep & K. Joseph John.	Throughout India; southern & southeastern Asia	Annual herb	Common in coastal plains	Forage value

	Family	Taxon name	Locality & herbarium/ germplasm collection details	Distribution (India; World)	Habit	Habitat	PGR value & other remarks
22	Fabaceae	<i>Vigna adenantha</i> (G.Mey.) Marechal et al. ^{***†} (Image 1C)	Campbell Bay, Vijay Nagar 2494 (NHCP23020; JP/17-56), 04.iii.2017, Vijay Nagar, Coll. K. Pradheep & K. Joseph John; 2774 (NHCP23135), 28.i.2018, Campbell Bay beach, Coll. K. Pradheep, K. Joseph John & I. Jaisankar.	Almost throughout; tropical Asia & Africa	Perennial climber	Rare in estuaries, lagoons	Wild relative of <i>Vigna</i> crops; plants with violet flower
23	Lamiaceae	<i>Mentha spicata</i> L. [†]	Campbell Bay, Govind Nagar, Rajiv Nagar 2480 (NHCP23012), 08.iii.2017, Campbell Bay, Coll. K. Pradheep & K. Joseph John.	Western Himalaya; a native of Europe to China, naturalized elsewhere	Procumbent herb	Common in moist/marshy places	Cultivated elsewhere as vegetable-cum-aromatic crop
24	Malvaceae	<i>Abelmoschus moschatus</i> Medik. ^{***†} (Image 1D)	Vijay Nagar, Joginder Nagar 2448 (NHCP23004; JP/17-35), 06.iii.2017, Vijay Nagar, Coll. K. Pradheep & K. Joseph John; 2493 (NHCP23019; JP/17-13), 04.iii.2017, Joginder Nagar, Coll. K. Pradheep & K. Joseph John.	Tropical area; southern & southeastern Asia	Herb	Rare along roadsides and sides of backwaters	Wild relative of okra; leaves characteristically deeply lobed
25	Oleaceae	<i>Jasminum elongatum</i> (P.J.Bergius) Willd. [*] (Image 1E)	Chingwan, Sastry Nagar, 17–18 km on East-West Road, Govind Nagar 2492 (NHCP23139), 06.iii.2017, Sastry Nagar, Coll. K. Pradheep & K. Joseph John; JP/18-106 (live collection), 27.i.2018, 19 Km from Campbell Bay to Kopenheat E-W Road.	Northeastern India, Andaman & Nicobar Islands; southern & southeastern Asia, Australia and Pacific Islands	Scandent climbing shrub	Occasional in mixed evergreen forests	Wild ornamental with fragrant white flowers
26	Phyllanthaceae	<i>Breynia lanceolata</i> (Hook.f.) Welzen & Pruesapan [*] (syn. <i>Sauropus rhamnoides</i> Blume)	Kamal Basti, Chingwan, Galathea, Campbell Bay 2461 (NHCP23010), 07.iii.2017, Campbell Bay, Coll. K. Pradheep & K. Joseph John; 2752 (NHCP23113), 28.i.2018, B-Quarry beach, Campbell Bay, Coll. K. Pradheep, K. Joseph John & I. Jaisankar	Andaman & Nicobar Islands; southeastern Asia	Small tree	Rare in open forest areas	---
27	Piperaceae	<i>Peperomia pellucida</i> (L.) Kunth [*]	Campbell Bay 2760 (NHCP23121), 19.i.2018, Campbell Bay, Coll. K. Pradheep, K. Joseph John & I. Jaisankar.	Assam, Kerala, Karnataka, Maharashtra, Meghalaya, Uttarakhand, Andaman & Nicobar Islands; native to tropical America, naturalized elsewhere	Small herb	Common in disturbed areas and moist field bunds	---
28	Piperaceae	<i>Piper clypeatum</i> Wall. ^{***†} (Image 1F)	Sastry Nagar to Galathea, Afra Bay 2756 (NHCP23117; JP/18-34), 18.i.2018, 3 Km from Sastry Nagar to Galathea, Coll. K. Pradheep, K. Joseph John & I. Jaisankar; JP/18-85 (live collection), 23.i.2018, Afra Bay; AJJPN/19-99 (live collection), 13.i.2019, Way to Indira Point.	Nicobar Islands; Malaysia and Indonesia	Creeper	Rare in mixed evergreen forests	Distant wild relative of black pepper; potential as new foliage ornamental for humid tropics

	Family	Taxon name	Locality & herbarium/ germplasm collection details	Distribution (India; World)	Habit	Habitat	PGR value & other remarks
29	Poaceae	<i>Paspalum sumatrense</i> Roth [†]	Vijay Nagar 2495 (NHCP23161), 04.iii.2017, Vijay Nagar, Coll. K. Pradheep & K. Joseph John.	Tropical and subtropical areas; tropical & subtropical Asia, Australia and Pacific Islands	Herb	Occasional along roadsides	Wild relative of kodo millet
30	Poaceae	<i>Saccharum spontaneum</i> L. ^{†*}	Joginder Nagar, Sastri Nagar to Galathea 2496 (NHCP23021; JP/17- 12), 04.iii.2017, Joginder Nagar, Coll. K. Pradheep & K. Joseph John.	Almost throughout; Africa, Asia, and Australia	Perennial herb	Rare in forest edges and roadsides	Wild relative of sugarcane; thin-culmed type
31	Pontederiaceae	<i>Monochoria vaginalis</i> (Burm.f.) C.Presl ^{†*}	Campbell Bay 2767 (NHCP23128), 29.i.2018, Campbell Bay, Coll. K. Pradheep, K. Joseph John & I. Jaisankar.	Almost throughout; tropical & subtropical Asia, and Australia	Aquatic herb	Occasional in ditches and sewage lines	---
32	Rhamnaceae	<i>Ziziphus oenopolia</i> (L.) Mill. ^{†*}	Afra Bay, Campbell bay 2797, 15.i.2019, Near Army area, Campbell Bay, Coll. K. Pradheep & K. Joseph John; 2463 (NHCP23108), 10.iii.2017, Campbell Bay, Coll. K. Pradheep & K. Joseph John.	Tropical and subtropical areas; southern & southeastern Asia and Australia	Scandent shrub	Rare in open areas and low-land swampy areas	Wild relative of 'ber'; also found in Little Nicobar
33	Scrophulariaceae	<i>Bacopa monnieri</i> (L.) Pennell ^{†*} (Image 1G)	Campbell Bay, Sastry Nagar to Galathea, Rajiv Nagar 2481 (NHCP23013; JP/17- 69), 08.iii.2017, Campbell Bay, Coll. K. Pradheep & K. Joseph John.	Throughout; Africa, Asia, Australia, and North & South America	Procumbent herb	Wetland weed	Medicinal plant cultivated in mainland India; wild/ weedy form
34	Solanaceae	<i>Solanum sisymbriifolium</i> Lam. ^{†*}	Sastry Nagar to Galathea 2754 (NHCP23115), 17.i.2018, Sastry Nagar, Coll. K. Pradheep, K. Joseph John & I. Jaisankar.	Odisha, West Bengal, Tamil Nadu, Meghalaya, Andaman Islands; native to South America, naturalized in Africa, Asia, and Australia	Thorny annual herb	Occasional along roadsides, especially in sunny sites	Wild relative of brinjal
35	Solanaceae	<i>Solanum virginianum</i> L. ^{†*}	Sastry Nagar to Galathea, Campbell Bay 2444 (NHCP23002), 05.iii.2017, Campbell Bay beach, Coll. K. Pradheep & K. Joseph John.	Almost throughout; Asia	Spiny prostrate herb	Rare weed	Wild relative of brinjal
36	Tiliaceae	<i>Corchorus aestuans</i> L. ^{†*}	Campbell Bay, Sastry Nagar JP/17-05 (live collection), 04.iii.2017, Campbell Bay; AJJPN/19-184 (IC631166; live collection), Sastry Nagar.	Throughout; pantropical	Annual herb	Occasional in wet areas	Wild relative of jute
37	Verbenaceae	<i>Vitex trifolia</i> L. ^{†*}	Campbell Bay 2449 (NHCP23005), 07.iii.2017, Campbell Bay, Coll. K. Pradheep & K. Joseph John.	Almost throughout; Africa, Asia, Australia, and Pacific Islands	Tall shrub	Hedge plant; also self- sown	---
38	Zingiberaceae	<i>Curcuma mangga</i> Valetton & Zijp ^{†*}	Campbell Bay, Govind Nagar, Rajiv Nagar JP/17-24 (live collection), 05.iii.2017, Rajiv Nagar; JP/17-44 (live collection), 07.iii.2017, Campbell Bay.	Andaman & Nicobar Islands; southeastern Asia (Indonesia)	Herbaceous perennial	Common in disturbed areas	Wild relative of mango- ginger

	Family	Taxon name	Locality & herbarium/ germplasm collection details	Distribution (India; World)	Habit	Habitat	PGR value & other remarks
39	Zingiberaceae	<i>Hedychium coronarium</i> J.Koenig ^b	East-West Road, Gandhi Nagar, Sastry Nagar 2811, 14.i.2019, Sastry Nagar, Coll. K. Pradheep, K. Joseph John & I. Jaisankar.	Throughout India; southern Asia and Indo-China	Herbaceous perennial	Common in disturbed areas	Ornamental value

^a— wild species | ^b— naturalized species | ^c— invasive species (as per Invasive Species Specialist Group of the IUCN Species Survival Commission) | *—new to Nicobar group of islands also | †—of importance as wild relative of crops.



Image 1. Some new additions to the flora of Great Nicobar. A—*Stictocardia tiliifolia* | B—*Diospyros undulata* | C—*Vigna adenantha* (inset: inflorescence with immature pod) | D— *Abelmoschus moschatus* | E— *Jasminum elongatum* | F—*Piper clypeatum* | G—*Bacopa monnieri*. © K Pradheep.

Zanthoxylum rhetsse DC., (in Galathea) and *Panicum repens* L. (in East-West Road) from this island, which needs further confirmation.

Further exploration would warrant many more distribution records to the study area and new yet-to-be described native species, which will help in better understanding of phytogeography as well as ecosystem of this part of Sundaland Biodiversity Hotspot.

REFERENCES

- Alappatt, J.P. (2017).** *Common Forest Plants of Andaman & Nicobar Islands*. Department Environment & Forests, Andaman & Nicobar Administration, Port Blair, 317pp.
- Balakrishnan, N.P., D.K. Hore & R.P. Dwivedi (1989).** *Great Nicobar Biosphere Reserve Project Document 11*. Ministry of Environment & Forest, Govt. India, New Delhi, 70pp.
- Dagar, J.C. & N.T. Singh (1999).** *Plant Resources of the Andaman & Nicobar Islands, Vol. 2*. Bishen Singh Mahendra Pal Singh, Dehradun, 900pp.
- Gupta, S., M.C. Porwal & P.S. Roy (2004).** Orchid diversity of Great Nicobar Biosphere Reserve. *Current Science* 86: 1372–1374; https://www.currentscience.ac.in/Downloads/article_id_086_10_1372_1374_0.pdf
- ILDIS (2006).** International Legume Database and Information Service World Database of Legumes, Version 10. ILDIS, Reading, United Kingdom; <https://ildis.org/LegumeWeb10.01.shtml>
- Jayanthi, J. (2017).** *Flora of Campbell Bay National Park, Great Nicobar, India*. Botanical Survey of India, Kolkata, 425pp.
- Kothamsi, D.M., A. Bhattacharyya & C.R. Babu (1995).** Diversity of Great Nicobar plant communities. *Journal of Andaman Science Association* 11: 62–64.
- Mahanand, S., M.D. Behera & P.S. Roy (2017).** Plant dispersal profile of Indian tropical sub-continent on the basis of species commonality. *Tropical Ecology* 58: 357–368.
- Palni, L.M.S., R.S. Rawal, R.K. Rai & S.V. Reddy (eds.) (2012).** *Compendium on Indian Biosphere Reserves Progression during Two Decades of Conservation*. G.B. Pant Institute of Himalayan Environment & Development; Ministry of Environment and Forests, Government of India, 196pp.
- Pandey, R.P. & P.G. Diwakar (2008).** An integrated checklist of plants in Andaman & Nicobar Islands, India. *Journal of Economic and Taxonomic Botany* 32: 403–500.
- Sahni, K.C. (1953).** Botanical exploration in the Great Nicobar Island. *Indian Forester* 79: 3–16.
- Sinha, B.K. (1999).** *Flora of Great Nicobar Island*. Botanical Survey of India, Calcutta, 525pp.
- Thothathri, K., S.P. Banerjee, P.K. Hajra & G.D. Pal (1973).** Botanical results of the joint scientific expedition to the Great Nicobar Island. *Bulletin of Botanical Survey of India* 15: 235–265.
- WCSP (2019).** *World Checklist of Selected Plant Families*. Facilitated by the Royal Botanic Gardens, Kew. Published on the Internet; <http://wcsp.science.kew.org/> Downloaded on 14 August 2019.





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. 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)

May 2020 | Vol. 12 | No. 8 | Pages: 15767–15966

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

DOI: 10.11609/jott.2020.12.8.15767-15966

www.threatenedtaxa.org

Communications

Mammalian fauna in an urban influenced zone of Chandaka-Dampara Wildlife Sanctuary in Odisha, India

– Subrat Debata & Kedar Kumar Swain, Pp. 15767–15775

Species in peril: assessing the status of the trade in pangolins in Nepal

– Prayash Ghimire, Nirjala Raut, Pragya Khanal, Suman Acharya & Suraj Upadhaya, Pp. 15776–15783

Diversity and synanthropy of flies (Diptera: Calypttratae) from Ecuador, with new records for the country

– Karen Blacio, Jonathan Liria & Ana Soto-Vivas, Pp. 15784–15793

Butterfly diversity in Gidakom Forest Management Unit, Thimphu, Bhutan

– Thal Prasad Koirala, Bal Krishna Koirala & Jaganath Koirala, Pp. 15794–15803

Butterfly diversity in heterogeneous habitat of Bankura, West Bengal, India

– Kalyan Mukherjee & Ayan Mondal, Pp. 15804–15816

A second report on butterflies (Lepidoptera) from Ladakh Union Territory and Lahaul, Himachal Pradesh, India

– Sanjay Sondhi, Balakrishnan Valappil & Vidya Venkatesh, Pp. 15817–15827

Collecting parasitic Aculeata (Hymenoptera) from rice ecosystems of Tamil Nadu, India

– J. Alfred Daniel & K. Ramaraju, Pp. 15828–15834

An annotated checklist of sea slug fauna of Gujarat coast, India

– Piyush Vadher, Hitesh Kardani & Imtiaz Belem, Pp. 15835–15851

Additional description of the Algae Hydroid *Thyroscyphus ramosus* (Hydrozoa: Leptothecata: Thyroscyphidae) from Palk Bay, India with insights into its ecology and genetic structure

– G. Arun, R. Rajaram & K. Kaleshkumar, Pp. 15852–15863

Floristic composition and distribution pattern of herbaceous plant diversity in fallow lands of the central districts of Punjab, India

– Jashanpreet Kaur, Rajni Sharma & Pushp Sharma, Pp. 15864–15880

Morphological and molecular phylogenetic studies on *Battarrea phalloides* (Agaricales): a new report to Indian mycobiota

– R. Kantharaja & M. Krishnappa, Pp. 15881–15888

Diversity of polypores in Kerala Agricultural University main campus, Vellanikkara, Kerala, India

– M. Kiran, C.K. Adarsh, K. Vidyasagran & P.N. Ganesh, Pp. 15889–15904

Short Communications

On the evidence of the Irrawaddy Dolphin *Orcaella brevirostris* (Owen, 1866) (Mammalia: Cetartiodactyla: Delphinidae) in the Hooghly River, West Bengal, India

– Gargi Roy Chowdhury, Kanad Roy, Naman Goyal, Ashwin Warudkar, Rashid Hasnain Raza & Qamar Qureshi, Pp. 15905–15908

Avifaunal diversity of Tilyar Lake, Rohtak, Haryana, India

– Jagjeet Singh, Sandeep Antil, Vivek Goyal & Vinay Malik, Pp. 15909–15915

Life-history traits and courtship behaviour of four poorly known endemic bush frogs (Amphibia: Anura: Rhacophoridae) from the Western Ghats of India

– A.V. Abhijith & Shomen Mukherjee, Pp. 15916–15921

A first record of *Camacinia harterti* Karsch, 1890 (Odonata: Libellulidae) from Arunachal Pradesh, India

– Arajush Payra, K.A. Subramanian, Kailash Chandra & Basudev Tripathy, Pp. 15922–15926

Occurrence of *Fulgoraecia* (= *Epiricania*) *melanoleuca* (Lepidoptera: Epipyropidae) as a parasitoid of sugarcane loophopid planthopper

Pyrilla perpusilla in Tamil Nadu (India) with brief notes on its life stages

– H. Sankararaman, G. Naveenadevi & S. Manickavasagam, Pp. 15927–15931

A preliminary survey of soil nemafuna of Bhagwan Mahaveer Wildlife Sanctuary, Goa, India

– Kiran Gaude & I.K. Pai, Pp. 15932–15935

Thirty-nine newly documented plant species of Great Nicobar, India

– Kanakasabapathi Pradheep, Kattukkunnel Joseph John, Iyyappan Jaisankar & Sudhir Pal Ahlawat, Pp. 15936–15944

Notes

An observation of homosexual fellatio in the Indian Flying Fox

Pteropus medius (Temminck, 1825) (Mammalia: Chiroptera: Pteropodidae)

– K.S. Gopi Sundar & Swati Kittur, Pp. 15945–15946

Diurnal observation of a Malayan Krait *Bungarus candidus* (Reptilia: Elapidae) feeding inside a building in Thailand

– Cameron Wesley Hodges, Anji D'souza & Sira Jintapirom, Pp. 15947–15950

An additional record of the Tamdil Leaf-litter Frog *Leptobrachella tamdil* (Sengupta et al., 2010) (Amphibia: Megophryidae) from Dampa Tiger Reserve, Mizoram, India

– Vanlalsiammawii, Remruatpuii, V.L. Malsawmhriatzuali, Lalmuansanga, Gospel Zothanmawia Hmar, Saisangpuia Sailo, Ht. Decemson, Lal Biakzuala & H.T. Lalremsanga, Pp. 15951–15954

Records of dragonflies and damselflies (Insecta: Odonata) of Dipang Lake, with two new records to Nepal

– K.C. Sajjan & Juddha Bahadur Gurung, Pp. 15955–15961

Henry's Rattan *Calamus henryanus* Becc. (Arecaceae), a new record to India

– Selim Mehmud & Himu Roy, Pp. 15962–15966

Member



Publisher & Host

