CASE REPORT

Names of new taxa published and types deposited-A case study

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Abstract: A verification exercise was undertaken to check whether the types of the names of the new taxa published in an Indian Taxonomy journal “Rheedeia” between 1991 and 2004 are duly deposited in the different herbaria of Botanical Survey of India cited in the protologues. The results are summarized and the implications deliberated.

Key Words: New taxa; Names; Type deposition; Verification.

Introduction

In one of our earlier publications (Bandyopadhyay *et al.*, 2014), we had pointed out that authors of the names of new taxa, in some instances, fail to deposit the holotypes in the herbaria stated in the protologues. We have physically verified the availability of the types, in the different herbaria of Botanical Survey of India, of the names of the new taxa published in an Indian Taxonomy journal “Rheedeia” covering 1–14 volumes for the period between 1991 and 2004. In all, we examined 71 cases and encountered 3 situations while searching them in the herbaria stated in the protologues. – 1) Types deposited, 2) Types partly deposited and 3) Types not deposited / could not be traced. The findings are presented below.

Types deposited

1. *Aeginetia sessilis* Shivam. & Rajanna, Rheedeia 4(2): 133. 1994. (Orobanchaceae).

Type: Karnataka, Chikmagalur district, Kerekatte, 26.9.1992, *Shivamurthy* 114-A (Holotype, CAL; isotype, MGM).

Notes: Holotype available at CAL.

2. *Amorphoballus commutatus* (Schott) Engl. var. *anmodensis* Sivad. & Jaleel, Rheedeia 12(2): 159. 2002. (Araceae).

Type: Goa, Anmod Ghat, 570 m, 4th June 1997, *Abdul Jaleel* RLA 68 (Holotype, K; isotype, CAL).

Notes: Isotype available at CAL.

3. *Aponogeton bruggenii* S. R. Yadav & Govekar, Rheedeia 4(1): 34. 1994. (Aponogetonaceae).

Type: Maharashtra, Sindhudurg district, Nerurpar, about 9 km west to Kudal, 10.9.1992, *Yadav* 1 (Holotype, CAL; isotype, BSI).

Notes: Holotype and isotype available at CAL and BSI, respectively.

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4. *Ardisia stonei* Sasidh. & Sivar., Rheedeia 4(2): 116. 1994. (Myrsinaceae).

Type: Kerala: Thrissur district, Peechi, c. 600 m, 18.9.1990, *Sasidharan* 5719 (Holotype, MH; isotypes, KFRI, CALI); Kollam district, Rosemala, c. 500 m, 10.5.1994, *Sasidharan* 10954 (Paratype, KFRI).

Notes: Holotype available at MH.

5. *Biophytum veldkampii* A.E.S. Khan, E.S.S. Kumar, S. Binu & Pushp., Rheedeia 8(1): 79. 1998. (Oxalidaceae).

Type: Kerala, Thiruvananthapuram district, Nedumangad, 6 May 1995, *Santhosh Kumar* 22376 (Holotype, TBGT; isotypes, CALI, MH, L).

Notes: Isotype available at MH.

6. *Dimeria chelariensis* Ravi, Rheedeia 5(1): 37. 1995. (Poaceae).

Type: Kerala, Malappuram district, Chelari, 28 Nov. 1992, *Ravi* 3606 (Holotype, TBGT; isotypes, MH, KFRI).

Notes: Isotype available at MH.

7. *Dimeria eradii* Ravi, Rheedeia 5(1): 39. 1995. (Poaceae).

Type: Kerala, Malppuram district, Tenhipa'am, 29 Nov. 1992, *Ravi* 3641 (Holotype, TBGT; isotypes, MH, KFRI).

Notes: Isotype available at MH.

8. *Dimeria idukkiensis* Ravi & Anil Kumar, Rheedeia 2(2): 104. 1992. (Poaceae).

Type: Kerala, Idukki district, Peermedu, Kuttikkanam, ±1000 m, 19 Oct. 1991, *Anil Kumar* 3190 (Holotype, MH; isotypes, CAL, KFRI, SNCH). Notes: Holotype and isotype available at MH and CAL, respectively.

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9. *Dimeria namboodiriana* Ravi & N.Mohanani, Rheede 7(1): 1. 1997. (Poaceae).
Type: Kerala, Pathanamthitta district, Ponnambalamedu, 5 Jan. 1996. *Ravi* 24050 (Holotype, TBGT; isotypes, K, KFRI, L, MH).
Notes: Isotype available at MH.
10. *Dimeria sivarujanii* N.Mohanani & Ravi, Rheede 6(2): 47. 1996. (Poaceae).
Type: Kerala: Pathanamthitta district, Kochu Pampa hills, 4 Jan. 1996, *Ravi TBGT&RI* 24041 (Holotype, TBGT; isotypes, MH, KFRI); Pathanamthitta district, Kochu Pampa hills, 17 Dec. 1992, *Ravi SNCH* 3723 (Paratype, TBGT); *ibid.*, *Ravi SNCH* 3726 (Paratype, TBGT).
Notes: Isotype available at MH.
11. *Dimeria sreenarayanae* Ravi & Anil Kumar, Rheede 2(2): 101. 1992, '*sreenarayanae*'. (Poaceae).
Type: Kerala, Idukki district, Peermedu, Kuttikkanam, ±1000 m, 30, Dec. 1991, *Anil Kumar* 3297 (Holotype, MH; isotypes, CAL, KFRI, SNCH).
Notes: Holotype available at MH. Isotype available at CAL.
12. *Eriocaulon apetalum* Puneekar, Malpure & Lakshmin., Rheede 13(1&2): 19. 2003 publ. 2004. (Eriocaulaceae).
Type: Maharashtra: Ahmednagar district, Harishchandragad, between Lavhali and Pachnai village (N 19°25.823' & E 73°47.944'), 20 October 2002, *Puneekar & Malpure* 186485 (Holotype, CAL; isotypes, BSI, MH); Satara district, Mahabaleshwar, Kate's point (N 17°56.270' & E 73°41.488'), 25 October 2002, *Puneekar* 186101 (Paratype, BSI).
Notes: Holotype available at CAL. Isotypes available at BSI and MH. Paratype available at BSI.
13. *Eriocaulon cookei* Puneekar, Malpure & Lakshmin., Rheede 13(1&2): 21. 2003 publ. 2004. (Eriocaulaceae).
Type: Maharashtra: Ahmednagar district, Harishchandragad, between Lavhali and Pachnai villages (N 19°25.823' & E 73°47.944'), 20 October 2002, *Puneekar & Malpure* 186484 (Holotype, CAL; isotypes, BSI, MH); Satara district, Panchgani, August 1892, *W.A.Talbot* 263 (Paratype, BSI); Panchgani plateau, 28 January 1962, *A.S. Rao* 77974 (Paratype, BSI); Pune district, Dhak plateau, Junnar, 29 September 1965, *K. Hemadri* 107481 & 27 September 1967, *K. Hemadri* 77947 (Paratypes, BSI); Thane district, Kedarnath hill slopes, 17 January 1968, *K.V. Billore* 115510 (Paratype, BSI).
Notes: Holotype available at CAL. Isotypes available at BSI and MH. Paratypes available at BSI.
14. *Eriocaulon karnatakense* S.P.Gaikwad, Sardesai, U.S.Yadav & S.R.Yadav, Rheede 14(1&2): 63. 2004. (Eriocaulaceae).
Type: Karnataka, Kemmangundi, about 54 km from Chikmagalur at 1500 m in the crevices of rocks, 15 October 2000, *S.P.Gaikwad* 3 (Holotype, CAL; isotypes, BSI, K, SUK).
Notes: Holotype and isotype available at CAL and BSI, respectively.
15. *Eriocaulon kolhapurens* S.P.Gaikwad, Sardesai & S.R.Yadav, Rheede 12(2): 133. 2002. (Eriocaulaceae).
Type: Maharashtra, Kolhapur, Chike Wadi (Ranga fort), c. 800 m, 30 Oct. 1998, *Sardesai* 5350 (Holotype, CAL; isotypes, BSI, K, BLAT, CALI, SUK).
Notes: Holotype and isotype available at CAL and BSI, respectively.
16. *Eriocaulon koynense* Puneekar, Mungikar & Lakshmin., Rheede 13(1&2): 21. 2003 publ. 2004. (Eriocaulaceae).
Type: Maharashtra, Satara district, Koyna Wildlife Sanctuary, Old Vasotagad, 20 December 2002, *Rahul Mungikar* 186488 (Holotype, CAL; isotypes, BSI, MH).
Notes: Holotype available at CAL. Isotypes available at BSI and MH.
17. *Eriocaulon maharashtrense* Puneekar & Lakshmin., Rheede 13(1&2): 24. 2003 publ. 2004. (Eriocaulaceae).
Type: Maharashtra, Pune district, Mulshi Taluka, Nive village, between Tamhini and Dongarwadi, 12 February 2002, *Puneekar* 186495 (Holotype, CAL; isotypes, BSI, MH).
Notes: Holotype available at CAL. Isotypes available at BSI and MH.
18. *Eriocaulon ratnagiricum* S.R.Yadav, S.P.Gaikwad & M.M.Sardesai, Rheede 8(2): 145. 1998, '*ratnagiricus*'. (Eriocaulaceae).
Type: Maharashtra, Dharmshala, about 3 km from Ratnagiri on the way to Pavas, on laterite soil, 1st October 1996, *Gaikwad* 1A (Holotype, CAL), *Gaikwad* 1B (Isotype, BSI), *Gaikwad* 1C (Isotype, K), *Gaikwad* 1D (Isotype, BL), *Gaikwad* 1E (Isotype, SUK).
Notes: Holotype available at CAL. Isotype available at BSI.
19. *Eriocaulon sahyadricum* Puneekar, Malpure & Lakshmin., Rheede 13(1&2): 25. 2003 publ. 2004. (Eriocaulaceae).
Type: Maharashtra: Satara district, Mahabaleshwar, Kate's point (N 17°56.270' & E 73°41.488'), 25 October 2002, *Puneekar* 186500 (Holotype CAL; isotypes, BSI, MH); Sindhudurg district, Amboli plateau, 10 February 2003, *Malpure* 186115 (Paratype, BSI); Ahmednagar district, Harishchandragad, 26 September 1970, *B.M. Wadhwa* 127692 (Paratype, BSI); Pune district, Bhimashankar, southern slopes of Choura hills, 11 October 1962, *K.P. Janardhanan* 81840 (Paratype,

- BSI); Satara district: Mahabaleshwar, 28 October 1956, G.S. Puri 9206 (Paratype, BSI); Mahabaleshwar near Venna Lake, 4 January 1957, S.D. Mahajan 13047 (Paratype, BSI); Mahabaleshwar, Dhobi fall, 15 October 1959, S.D. Mahajan 24763 (Paratype, BSI); Mahabaleshwar, Machutar forest on Satara road, 10 October 1960, M.Y. Ansari 67538 (Paratype, BSI); Sindhudurg district, Amboli, 4 October 1964, R.S. Raghavan 103221 (Paratype, BSI); Thane district: Pachnai plateau, 15 November 1968, K.V. Billore 115481 (Paratype, BSI); Kedarnath hill slopes, Harishchandragad, 17 November 1968, K.V. Billore 115532 (Paratype, BSI). Goa: Surla, 27 September 1970, N.P. Singh s.n. (Paratype, BSI); Waghai, 29 September 1970, N.P. Singh 124812 (Paratype, BSI); Verlem, Bhutabaicha Dongar, 12 October 1970, N.P. Singh 125358 (Paratype, BSI). Karnataka: Shimoga district: Balehalli forest, Agumbe, 28 November 1960, R.S. Raghavan 67842 (Paratype, BSI); Karodi near Tirthahalli, 28 September 1962, R.S. Raghavan 82755 (Paratype, BSI); Kavaleedurga, 2 October 1962, R.S. Raghavan 82918 (Paratype, BSI); Barkara, Agumbi, 31 August 1963, R.S. Raghavan 90352 (Paratype, BSI); North Kanara district, Castle Rock, 19 September 1970, M.Y. Ansari 124122 (Paratype, BSI).
Notes: Holotype available at CAL. Isotypes available at BSI and MH. Paratypes available at BSI.
20. *Euphorbia balakrishnanii* Binojk. & Gopalan, Rheedea 8(1): 67. 1998. (Euphorbiaceae).
Type: Tamil Nadu, Tirunelveli, marshy areas of scrub forests in Valland R.F., 25 Feb. 1990, Binojkumar 85092 (Holotype, CAL; isotypes, MH).
Notes: Holotype and 3 isotypes at MH. The holotype should have been deposited at CAL.
21. *Euphorbia concanensis* Janarth. & S.R. Yadav, Rheedea 5(2): 148. 1995. (Euphorbiaceae).
Type: Maharashtra, Sindhudurg district, Achirane between Phonda and Vaibhavadi, 20.9.1993, Janarthanam & Yadav 1002 (Holotype, CAL; isotypes, BSI, MH).
Notes: Holotype available at CAL. Isotypes available at BSI and MH.
22. *Fimbristylis angamoozhiensis* Ravi & Anil Kumar, Rheedea 3(2): 108. 1993. (Cyperaceae).
Type: Kerala, Pathanamthitta district, Angamoozhi, Anilkumar 1799 (Holotype, MH; isotype, SNCH: Sree Narayana College Herbarium, Kollam).
Notes: Holotype available at MH.
23. *Fimbristylis pseudonarayanii* Ravi & Anil Kumar, Rheedea 3(2): 110. 1993. (Cyperaceae).
Type: Kerala: Kollam district, Thenmalai, Ravi 2254 (Holotype, MH; isotype, SNCH: Sree Narayana College Herbarium, Kollam); Idukki district, Vivekananthan 20399 (Paratype, MH); Kottur, Thiruvananthapuram district, Monaban 10188 (Paratype, TBGT); Bonaccord, Thiruvananthapuram district, Mohanan 7949 (Paratype, TBGT).
Notes: Holotype and paratype available at MH.
24. *Fuirena ponmudiensis* Ravi & Anil Kumar, Rheedea 4(2): 102. 1994. (Cyperaceae).
Type: Kerala, Thiruvananthapuram district, Ponmudi hills, Seethatheertham, Anilkumar 1068 (Holotype, MH; isotypes, TBGT, SNCH: Sree Narayana College Herbarium, Kollam).
Notes: Holotype available at MH.
25. *Hibiscus sreenarayanianus* Anil Kumar & Ravi, Rheedea 4(2): 129. 1994. (Malvaceae).
Type: Kerala, Kollam district, near Kollam Town, Palkulangara, Ravi 3418 (Holotype, MH; isotypes, TBGT, SNCH: Sree Narayana College Herbarium, Kollam).
Notes: Holotype is available at MH.
26. *Ischaemum kumarakodiense* Ravi, N. Mohanan & Kiran Raj, Rheedea 8(2): 149. 1998, '*kumarakodiensis*'. (Poaceae).
Type: Kerala, Alappuzha district, Pallana, 29 Dec. 1996, Ravi TBG & RI 33084 (Holotype, TBGT; isotypes, K, MH, KFRI).
Notes: Isotype available at MH.
27. *Ischaemum pappinisseriense* Ravi, N. Mohanan & R. Rajesh, Rheedea 8(2): 155. 1998, '*pappinisseriensis*'. (Poaceae).
Type: Kerala, Kannur district, Pappinisseri, 12 Dec. 1996, Ravi TBG & RI 33707 (Holotype, TBGT; isotypes, K, MH, KFRI).
Notes: Isotype available at MH.
28. *Ischaemum pushpangadanii* Ravi, N. Mohanan & Kiran Raj, Rheedea 10(1): 49. 2000. (Poaceae).
Type: Kerala: Kozhikode district, Koilandy Taluk, Kakkayam hills, $\pm$ 420 m, 26.10.1999, Ravi 41460 (Holotype, TBGT; isotypes, CAL, MH, KFRI, TBGT); *ibid.*, 27.11.1998, Ravi 39622 (Paratypes, K, TBGT); *ibid.*, 27.11.1998, Ravi 39623 (Paratype, TBGT); *ibid.*, 26.10.1999, Ravi 41461 & 41462 (Paratypes, TBGT).
Notes: Isotypes available at CAL and MH.
29. *Ischaemum quilonense* Ravi & Shaju, Rheedea 8(2): 152. 1998, '*quilonensis*'. (Poaceae).
Type: Kerala, Kollam (Quilon) district, Perumkulam Ela near Kollam Town, 27 Oct. 1996, Ravi TBG & RI 24098 (Holotype, TBGT; isotypes K, MH, KFRI).
Notes: Isotype available at MH.
30. *Oberonia raoi* L.R. Shaky & R.P. Chaudhary, Rheedea 10(1): 57. 2000, '*raoi*'. (Orchidaceae).

Type: Meghalaya, Khasia hills, Nongpoh, 4000 ft. (1219 m), August 1897, *Pantling* 449798 (Holotype, CAL).

Notes: Holotype available at CAL. It has been traced from the general herbarium and deposited at Type – II herbarium.

31. *Strobilanthes pushpangadanii* E.S.S.Kumar, Jabbar & A.E.S.Khan, *Rheede* 12(1): 73. 2002. (Acanthaceae).

Type: Kerala, Thiruvananthapuram district: Mankayam hills, 800 m, *Santhosh Kumar* 14722 (Holotype, TBGT; isotypes, MH, CALI); Mankayam hills, *Santhosh Kumar & Abdul Jabbar* 14758 (Paratype, TBGT); TBGRI Field Gene Bank, *Santhosh Kumar* 34483 (Paratype, TBGT).

Notes: Isotype available at MH.

32. *Symplocos macrophylla* Wall. ex DC. subsp. *namboodiriana* Sivad. & N.Mohanan, *Rheede* 7(2): 89. 1997, '*namboodirianus*'. (Symplocaceae).

Type: Kerala, Thiruvananthapuram district, Agasthyamala Peak, c. 1700 m above MSL, 24 June 1993, *Mohanan* 11442 (Holotype, B; isotypes, CALI, K, L, MH, TBGT).

Notes: Isotype available at MH.

33. *Trithuria konkanensis* S.R.Yadav & Janarth., *Rheede* 4(1): 18. 1994. (Hydatellaceae).

Type: Maharashtra, Sindhudurg district, Achirane inter Phonda et Vaibhavadi, 20.9.1993, *S.R. Yadav & M. K. Janarthanam* 1001 (Holotype, CAL; isotype, BSI).

Notes: Holotype and isotype available at CAL and BSI.

34. *Utricularia janarthanamii* S.R.Yadav, Sardesai & S.P.Gaikwad, *Rheede* 10(2): 107. 2000. (Lentibulariaceae).

Type: Maharashtra, Kolhapur district, Kolhapur, 17 Aug. 1997, *Sardesai* 233 (Holotype, CAL; isotypes, K, BSI, BLAT, SUK).

Notes: Holotype and isotype available at CAL and BSI, respectively.

35. *Utricularia naikii* S.R.Yadav, Sardesai & S.P.Gaikwad, *Rheede* 10(2): 110. 2000. (Lentibulariaceae).

Type: Maharashtra, Sindhudurg district, Amboli, 29 Sept. 1999, *Sardesai* 1911 (Holotype, CAL; isotypes, K, BSI, BLAT, SUK).

Notes: Holotype and isotype available at CAL and BSI, respectively.

36. *Viscum subracemosum* Sanjai & N.P.Balacr., *Rheede* 10(2): 113. 2000. (Viscaceae).

Type: Karnataka, Krishnarajapuram, near the ITI gate, on trees of *Pongamia glabra*, 900 m, 20 Oct. 1995, *Sanjai* 104912 (Holotype, CAL; isotype, MH). Tamil Nadu, Coimbatore, TNAU Campus, in front of the canteen on *Pongamia glabra*, 260 m, 3 June 1997, *Sanjai* 104936 (Paratype, MH).

Notes: Holotype, isotype and paratype available at MH. The holotype should have been deposited at CAL.

Types partly deposited

1. *Euphorbia lawsonii* Binojk. & Dwarakan, *Rheede* 4(1): 60. 1994. (Euphorbiaceae).

Type: Karnataka, Bellary, Nov. 1887, *Lawson s.n.* (Holotype, CAL). Tamil Nadu, Salem district, Kolli hills, 1100 m, 28.4.1991, *Dwarkan* 513 (Paratype, MH).

Notes: Holotype not available at CAL. Paratype available at MH.

2. *Euphorbia sebastinei* Binojk. & N.P.Balacr., *Rheede* 3(1): 26. 1993. (Euphorbiaceae).

Type: Andhra Pradesh, Hyderabad, Mossi River bank, 833m, 26 June 1958, *K.M. Sebastine* 5975 (Holotype, CAL; isotypes, MH, K). Maharashtra, Bombay, Ganeshkhind Garden, Kirleu, 14.6.1909, *Kulkarni s.n.* (Paratype, CAL); Gujarat, Dwarka, 17.4.1954, *Kaul* 9061 (Paratype, LWG).

Notes: Holotype and isotype available at MH. Paratype not available at CAL. The holotype should have been deposited at CAL.

3. *Glyphochloa henryi* Janarth., V.C.Joshi & S.Rajkumar, *Rheede* 10(2): 99. 2000. (Poaceae).

Type: Goa: Tisk-Usgao, 15° 24' 52.4" N, 74° 04' 36" E, 27.9.1998, *Janarthanam & Rajkumar* 1661 (Holotype, CAL; isotypes, BSI, L, MH); Cotigao Sanctuary, 11.11.1998, *Vaishali Joshi & Rajkumar* 1690 (Paratype, Goa University Herbarium).

Notes: Holotype and isotype available at CAL and BSI, respectively. Isotype not available at MH.

4. *Glyphochloa veldkampii* M.A.Fonseca & Janarth., *Rheede* 13(1&2): 35. 2004. (Poaceae).

Type: Goa, Kasauli, along the Panaji-Belgaum highway (NH 4A) in the outskirts of Bhagwan Mahavir Wildlife Sanctuary, 15°21'30.9" N & 74°11'37.1" E, c. 85 m above msl, 21 October 2001, *Janarthanam & Fonseca* 1901 (Holotype, CAL; isotypes, BSI, MH).

Notes: Holotype and isotype available at CAL and BSI, respectively. Isotype not available at MH.

5. *Leea advivedica* K.Kumar, *Rheede* 10(2): 103. 2000. (Leeaceae).

Type: North Andaman Islands, Dumar Nullah, Lamia bay, 23 Sept. 1990, *Krishna Kumar* 338 (Holotype, CAL; isotype, Herbarium, Botany Department, Jawaharlal Nehru Rajkeeya Mahavidyalaya, Port Blair); North Andaman Islands, Sinduri Nullah, 18 June 1998, *Krishna Kumar* 19A (Paratype, K); 19B & C (Paratypes, CAL, PBL).

Notes: Holotype and paratype at CAL. There is also an isotype at CAL. Paratype not available at PBL.

6. *Valeriana himachalensis* V.Prakash & Mehrotra, Rheede 4(1): 70. 1994. (Valerianaceae).

Type: Himachal Pradesh, Thali Forest, 2200 m, June 19, 1974, B.M. Wadhwa 53071 (Holotype and isotype, BSD).

Notes: Holotype available at BSD but not the isotype.

Types not deposited / could not be traced

1. *Amomum garoense* Sunil Tripathi & Ved Prakash, Rheede 9(2): 177. 1999, 'garoensis'. (Zingiberaceae).

Type: Meghalaya, Garo hills; Baghmara district, Umphamgiri, 14 May 1997, Sunil Tripathi 20834 (Holotype, CDRI; isotype, CAL).

2. *Amorphophallus commutatus* (Schott) Engl. var. *wayanadensis* Sivad. & Jaleel, Rheede 12(2): 163. 2002. (Araceae).

Type: Kerala: Wayanad Ghat, 29th April 1997, Abdul Jaleel RLA 62 (Holotype, K; isotype, CAL); Kollam district, Thenmala, behind the Forest Range Office, 3rd May 1979, Sivadasan CU 21447 (Paratype, US); Kozhikode district, Vaithiri Ghats, after 1st hair-pin curve, 16th June 1976, Sivadasan CU 19009 (Paratype, L); Palakkad district: Mukkali, 29th May 1966, Vajravelu 27711 (infl.) (Paratype, MH); Manthampotti, 16th May 1977, Sivadasan CU 19174 (leaf) (Paratype, CALI); *ibid.*, 25th May 1978, Sivadasan CU 21464 (Paratype, K); *ibid.*, 11th May 1984, Sabu CU 36542 (leaf) (Paratype, CALI); *ibid.*, 11th May 1984, Sivadasan CU 36544 (infl.) (Paratype, CALI); Dhoni hills, 26th Jan. 1978, Sivadasan CU 21434 (infl.) (Paratype, CALI); *ibid.*, 25th May 1978, Sivadasan CU 21426 (infl.) (Paratypes, CALI, US); Dhoni hills, 24th June 1978, Sivadasan CU 21434 B (leaf) (Paratype, CALI); Wayanad district: Vaithiri, 13th Sept. 1975, Sivadasan CU 7815 (infl.) (Paratype, CALI); Wayanad Ghat, 29th April 1997, Abdul Jaleel & Bobby Thomas RIA 61 (leaf) (Paratype, CALI); *ibid.*, 29th April 1997, Abdul Jaleel, & Bobby Thomas RIA 62 (infl.) (Paratype, CALI).

3. *Arundinella ravii* Shaju & N.Mohanan, Rheede 14(1&2): 47. 2004. (Poaceae).

Type: Kerala, Idukki district, Eravikulam National Park, ±1880 m, 8.11.2000, Shaju 43700 (Holotype, TBGT; isotypes, MH, CALI).

4. *Bulbophyllum rheedei* Manilal & C.S.Kumar, Rheede 1(1&2): 55. 1991. (Orchidaceae).

Type: Kerala: Trivandrum district: Palode, C. Sathish Kumar 4643 (Holotype, CALI; Isotypes, C, CAL, CALI, MH, TBGT); Palode, CSK 505, 507 (Paratypes, TBGT) 4643, 4686 (Paratypes, CALI, TBGT); Kallar, CSK s.n. (Paratype, CALI). Quilon district, Cheenikkala CSK 1622 (Paratype, CALI); Aleppey district, Muhamma in Shertallai, CRS 10230 (Paratype, CALI). Karnataka, South Kanara district, Karkal, s. coll. 11867 (Paratype, MH).

5. *Chrysopogon purusbothamanii* Ravi, N.Mohanan & Kiran Raj, Rheede 10(2): 94. 2000. (Poaceae).

Type: Kerala: Pathanamthitta district, Kozhanchery Taluk, Kokkathode, Kattathipara, ± 150 m, 25 Nov. 2000, Ravi 44811 (Holotype, TBGT; isotypes, CAL, MH, KFRI, TBGT); *ibid.*, 25 Nov. 2000, Ravi 44810, 44812, & 44813 (Paratypes, TBGT); *ibid.*, 26 Nov., 1999, Ravi 41927 (Paratypes, K, TBGT); *ibid.*, 26 Nov. 1999, Ravi 41928 (Paratype, TBGT).

6. *Cyathocline manilaliana* C.P.Raju & R.R.V.Raju, Rheede 9(2): 151. 1999. (Asteraceae).

Type: Andhra Pradesh, Adilabad district, Pochera stream, 430 m, 21 February 1994, Venkata Raju & Prabhakar Raju 13230 (Holotype, MH; isotype, SKU).

7. *Fimbristylis benthamiana* Govind., Rheede 7(2): 115. 1997. (Cyperaceae).

Type: Nadia district, Bagoola, R.E.P. 29127 (Herbarium of the Industrial Section, Indian Museum, Botanical Survey of India, Calcutta) (Holotype, CAL).

8. *Fimbristylis bispicula* Govind., Rheede 6(2): 59. 1996. (Cyperaceae).

Type: Karnataka, Shimoga, Agumbe, Nishanigudda, Govindarajulu 8800A (Holotype, CAL; isotypes, MH, BSI, BLAT, DD).

9. *Fimbristylis breviculma* Govind., Rheede 6(2): 61. 1996; nom. illeg. (Cyperaceae).

Type: Karnataka, Shimoga, Agumbe, Nishanigudda, Govindarajulu 8870A (Holotype, CAL; isotype, MH).

10. *Fimbristylis dimorphonucifera* Govind., Rheede 7(2): 122. 1997. (Cyperaceae).

Type: S. Kanara, Kannadekatta, Govindarajulu 8860 G (Holotype, CAL).

11. *Fimbristylis doliiformis* Govind., Rheede 8(1): 89. 1998. (Cyperaceae).

Type: Tamilnadu, Trichirapalli district, Bharatidhasan University Campus, Govindarajulu 721 (Holotype, CAL; isotypes, MH, LWG, BSI, DD, BLAT).

12. *Fimbristylis humerosa* Govind., Rheede 7(2): 117. 1997. (Cyperaceae).

Type: Kerala, Peringalkuthu Division, on the way to Orukomban, Govindarajulu 6012 A (Holotype, CAL; isotype, MH).

13. *Fimbristylis manilaliana* Govind., Rheede 8(1): 87. 1998. (Cyperaceae).

Type: Kerala, Calicut, Govindarajulu 12699 (Holotype, CAL; Isotypes, MH, CALI); *ibid.*, Govindarajulu 12697 A (Paratypes, ASSAM, LWG); *ibid.*, Govindarajulu 14972 (Paratypes, MH, DD).

14. *Fimbristylis mycosa* Govind., Rheedia 7(2): 124. 1997. (Cyperaceae).
Type: Tamilnadu, Madurai district, High Wavy Mts., Nursery Valley, *Govindarajalu* 39 (Holotype, CAL).
15. *Fimbristylis pandurata* Govind., Rheedia 7(2): 124. 1997. (Cyperaceae).
Type: Tamilnadu, Madurai district, High Wavy Mts., Thangaikalmottai, *Govindarajalu* 14295 A (Holotype, CAL).
16. *Fimbristylis stigmatotecta* Govind., Rheedia 6(2): 61. 1996. (Cyperaceae).
Type: Kerala, Munar, Devikulam Lockhart gap, *Govindarajalu* 15126 (Holotype, CAL; isotypes, MH, BSI, BLAT, DD).
17. *Fimbristylis tumida* Govind., Rheedia 8(1): 91. 1998. (Cyperaceae).
Type: Kerala, Sholayar, *Govindarajalu* 11017 (Holotype, CAL; isotypes, MH, BSI, BLAT); Tamilnadu: Tirunelveli district, Courtallam, on the way to Main Falls via Tiger Falls, *Govindarajalu* 10665 (Paratypes, ASSAM, LWG); *ibid.*, Palghat district, in and around Pothundy, *Govindarajalu* 14932 (Paratypes, MH, CAL); *ibid.*, Sheimaly, Kaikatty, *Govindarajalu* 14585 (Paratypes, DD, MH, CAL, BSI).
18. *Fimbristylis virella* Govind., Rheedia 8(1): 93. 1998. (Cyperaceae).
Type: Kerala, Chalakudi Division, Poringalkuthu, *Govindarajalu* 6072 (Holotype, CAL; isotype, MH); Karnataka, Someshwar Bachappu, *Govindarajalu* 13143 (Paratypes, BSI, BLAT).
19. *Grewia palodensis* E.S.S.Kumar, A.E.S.Khan, Binu & S.M.Almeida, Rheedia 11(1): 41. 2001. (Tiliaceae).
Type: Kerala, Thiruvananthapuram district: Manthuruthy Kavu, Palode, 20 June 1994, *Santhosh Kumar* 20091 (Holotype, TBGT; isotypes, CAL, MH, BLAT); Bonaccord, *Santhosh Kumar* 16067 (Paratype, TBGT); Ayaniyerathala Kavu, *Santhosh Kumar* 34495 (Paratype, TBGT).
20. *Habenaria periyarensis* Sasidh., K.P.Rajesh & Augustine, Rheedia 8(2): 167. 1998. (Orchidaceae).
Type: Kerala, Idukki district, Periyar Tiger Reserve, $\pm$ 1200 m, 5 August 1996, *Jomy Augustine* 17842 (Holotype, KFRI; isotypes, K, MH); *ibid.*, $\pm$ 1100 m, 19 August 1993, *Jomy Augustine* 12294 (Paratype, KFRI).
21. *Ischaemum lanatum* Ravi, N.Mohanan & Shaju, Rheedia 10(2): 91. 2000. (Poaceae).
Type: Kerala, Kasaragode district, Hosdurg Taluk, Periya, $\pm$ 50 m, 29 Nov. 1999, *Ravi* 41535 (Holotype, TBGT; isotypes, K, CAL, MH, KFRI, TBGT); *ibid.*, 29 Nov. 1999, *Ravi* 41536 (Paratype, TBGT).
22. *Justicia ekakusuma* Pradeep & Sivar., Rheedia 1(1&2): 42. 1991. (Acanthaceae).
Type: Kerala, Cannanore district, Payangadi, Madiapara, *Pradeep* 50401 (Holotype, MH; isotype, CALI).
23. *Ochlandra soderstromiana* M.Kumar & Sequiera, Rheedia 9(1): 33. 1999. (Poaceae).
Type: Kerala, Idukki district, Kallar Valley Estate, 1000 m, 15.6.1998, *S. Sequiera* 8883 (Holotype, KFRI); *S. Sequiera* 8882 (Paratype, MH).
Notes: The authors wrongly designated *S. Sequiera* 8882 as isotype.
24. *Ochlandra spirostylis* M.Kumar, K.K.Seethal. & Sequiera, Rheedia 9(1): 31. 1999. (Poaceae).
Type: Kerala, Idukki district, Adimali, Chattuparakudy, 900 m, 16.6.1988, *Stephen [Sequiera]* 8884 (Holotype, KFRI; isotype, MH); 30.5.1998, *Seethalakshmi* 8881 (Paratype, KFRI).
25. *Pentanema indicum* (L.) Y.Ling var. *sivarajanianum* R.R.V.Raju & C.P.Raju, Rheedia 6(2): 55. 1996. (Asteraceae).
Type: Andhra Pradesh, Upper Ahobilam, 24 December 1993, *Prabhakar Raju & Venkataraju* 13218 (Holotype, SKU; isotype, MH).
26. *Polyalthia shendurunii* Basha & Sasidh., Rheedia 4(1): 21. 1994. (Annonaceae).
Type: Kerala, Kollam district, Shenduruni, 25 May 1992, *Sasidharan* 5842 (Holotype, MH; isotype, KFRI).
27. *Syzygium periyarensis* Jomy Augustine & Sasidh., Rheedia 9(2): 155. 1999. (Myrtaceae).
Type: Kerala, Idukki district, Periyar Tiger Reserve, Sunderamala, $\pm$ 1300 m, 14 March 1994, *Jomy Augustine* 13570, (Holotype, MH; isotypes, KFRI, CALI).
28. *Tephrosia travancorica* Thoth. & D.N.Das, Rheedia 1(1&2): 57. 1991. (Leguminosae).
Type: Travancore, 1920, *Narayanaswamy* 1121 (Holotype, CAL).
29. *Thottea sivarajanii* E.S.S.Kumar, A.E.S.Khan & Binu, Rheedia 10(2): 117. 2000. (Aristolochiaceae).
Type: Kerala, Wayanad district, Periya, $\pm$ 500 m, 6 Dec. 1994, *Santhosh Kumar* 23218 (Holotype, TBGT; isotypes, K, CAL).

Conclusion

Over all analysis suggests that the types of 36 names exist at the stated herbarium / herbaria; types are partly available for 6 names; no types

could be located in the remaining 29 cases. Thus the types of nearly 41 per cent of the names published fall under 'Types not deposited/ could not be traced category'. It was also noticed that such lapse happened particularly with names of E. Govindarajalu (1925–1997) in *Fimbristylis* Vahl.

Types facilitate for which plant a name is to be precisely applied as names are permanently attached to the designated types. They stand as testimony to the name in future and ensure stability in nomenclature. If there is any contention between an author's description/diagnosis and the characters of that plant as exhibited by type specimen, those of the specimen are regarded as final. For the same reason, types are of great importance to the plant taxonomists, especially for those revising plant groups or engaged in preparing monographs.

So one should publish names of new taxa with due deposition of type material in the cited herbarium/herbaria. Lack of seriousness on the part of the authors, in doing so, leads to ambiguity and works against contributions done to the subject.

The issue of non-deposition of holotypes (Bandyopadhyay *et al.*, 2014) has been included in the 'List of proposals to amend the *International Code of Nomenclature for algae, fungi, and plants*, submitted to the XIX International Botanical Congress, Shenzhen, 2017' ([http://www.iapt-](http://www.iapt-taxon.org/historic/Congress/IBC_2017/Prop2017.htm)

[taxon.org/historic/Congress/IBC_2017/Prop2017.htm](http://www.iapt-taxon.org/historic/Congress/IBC_2017/Prop2017.htm)).

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