

During the year 2009, the Plant discoveries from India by the Plant Taxonomists of BSI and other organizations

NEW TO SCIENCE FROM INDIA

	10 genera
	184 species
New Species	1 nothospecies
	8 varieties

NEW RECORDS FOR INDIA

	5 genera
	60 species and
	1 variety

During the year 2009, the scientists of BSI published 1 new genus, 41 new species, and 3 new varieties of plants and discovered 3 genera, 31 species and 1 variety as new records for India, while the taxonomists from academia and other organizations published 9 new genera, 143 new species, 1 new nothospecies, 5 new varieties of new plants and 29 species as new records for India.

SEED PLANTS

The spermatophytes (also known as phanerogams) are those plants that produce seeds. The living spermatophytes form five main groups:

Cycads, a subtropical and tropical group of plants with a large crown of compound leaves and a stout trunk,

Ginkgo, a single living species of tree,

Conifers, cone-bearing trees and shrubs,

Gnetophytes, woody plants in the genera *Gnetum*, *Welwitschia*, and *Ephedra*, and

Angiosperms, the flowering plants, a large group including many familiar plants in a wide variety of habitats.

During 2009

01 new genus from Himalaya (*Cymbidiopsis*)

53 new species

01 nothospecies

(11 from Arunachal Pradesh, 06 from Tamil Nadu, 04 from Maharashtra, 04 from Kerala and 04 from Uttarakhand, 03 from Meghalaya, 03 from Andaman & Nicobar Islands, 03 from Jammu & Kashmir, 02 from Karnataka, 02 from Andhra Pradesh, 02 from Nagaland, 02 from unknown localities in North East India, 01 each from Goa, Jharkhand, Sikkim, Manipur, Mizoram and West Bengal and 01 species of *Ephedra* from Himachal Pradesh and 01 species distributed throughout the country) and

07 new varieties and 13 new distributional records have been published from India.

Seed Plants

NEW GENUS

CYMBIDIOPSIS H. J. Chowdhery, Ind. J. Forest. 32(1): 154. 2009. (ORCHIDACEAE)

NEW SPECIES

Aralia devendrae Pusalkar, Taiwania 54(3): 226. 2009. (ARALIACEAE)

Bambusa majumdarii P. Kumari & P. Singh, Kew Bull. 64(3): 565. 2009. (POACEAE: BAMBUSOIDEAE)

Bambusa mizorameana H.B. Naithani, Indian Forester 135(9): 1291. 2009. (POACEAE: BAMBUSOIDEAE)

Bambusa mohanramii P. Kumari & P. Singh, Kew Bull. 64(3): 567. 2009. (POACEAE: BAMBUSOIDEAE)

Bambusa nairiana P. Kumari & P. Singh, Bull. Bot. Surv. India 50: 13. 2009. (POACEAE: BAMBUSOIDEAE)

Berchemia jainiana Pusalkar & D.K. Singh, Bull. Bot. Surv. India 50: 9. 2009. (RHAMNACEAE)

Bhesa andamanica N. Balach. & Chakrab., J. Econ. Taxon. Bot. 33(3): 719. 2009. (CELASTRACEAE)

Canscora sanjappae Diwakar & R. Kr. Singh, Indian J. Forest. 32(2): 337. 2009. (GENTIANACEAE)

Chimonobambusa jainii T.P. Sharma & S.K. Borthakur, J. Econ. Taxon. Bot. 33: 783. 2009. (POACEAE: BAMBUSOIDEAE)

Chirita sahyadriensis Puneekar & P. Lakshmin., Folia Malaysiana 10(1): 17. 2009. (GESNERIACEAE)

Chlorophytum gothanense N.V. Malpure & S.R. Yadav, Kew Bull. 64: 739. 2009. (ANTHERIACEAE)

Cleisostoma schneideri Choltco, Orchid Rev. 117(1285): 41. 2009. (ORCHIDACEAE)

Coriaria duthiei D.K. Singh & Pusalkar, Nordic J. Bot. 27(3): 203. 2009. (CORIARIACEAE)

Corydalis kedarensis Pusalkar & D.K.Singh, Taiwania, 54(4): 334.2009. (FUMARIACEAE)

Dimeria jayachandranii Arisdason & P.Daniel, Kew Bull. 64(2): 345.2009. (POACEAE)

Dipcadi goaense A.Prabhugaonkar, U.S.Yadav & M.K.Janarthanam, Kew Bull. 64: 743. 2009. (HYACINTHACEAE)

Diplycosia indica Debta & H.J. Chowdhery, J. Bot. Res. Inst. Texas 3(1): 147, fig. 1. 2009. (ERICACEAE)

Eleocharis wadoodii S.R.Yadav, Lekhak & Chandore, Rheedeia 19(1 & 2): 37. 2009. (CYPERACEAE)

Embelia arunachalensis R.K. Choudhary, R.C. Srivast. & A.K. Das, J. Jap. Bot. 84(6): 338-341. 2009. (MYRSINACEAE)

Enkianthus indicus Debta & H.J.Chowdhery, J. Non-Timber Forest Prod. 16(2): 173. 2009. (ERICACEAE)

Ephedra sumlingensis P. Sharma & P.L. Uniyal, Bull. Bot. Surv. India 50: 179. 2009.

Ephedra sumlingensis P. Sharma & P.L. Uniyal, Bull. Bot. Surv. India 50: 179. 2009. (EPHEDRACEAE)

Eria hegdei Agrawala & H.J. Chowdhery, *Phytotaxonomy* 8: 8. fig. 1-2. 2008 [publ. 30 Sept. 2009.] (ORCHIDACEAE)

Eriocaulon baramaticum Shimpale, Bhagat, R.B. Deshmukh & S.R. Yadav, *Rheedea* 19(1 & 2): 47. 2009. (ERIOCAULACEAE)

Eriocaulon epedunculatum Potdar, Anil Kumar, Otaghvari & Sonkar, *Kew Bull.* 63(3): 503. fig. 1. 2009. (ERIOCAULACEAE)

Gaultheria kamengiana S. Panda & Sanjappa, *Pleione*, 3(2): 229. 2009. (ERICACEAE)

Gymnema kollimalayanum A. Ramachandran & M.B. Viswan., *Adansonia* 34(2): 408. 2009. (ASCLEPIADACEAE)

Impatiens vidyae R.C.Srivast., *Res. J. Hindi Sc. Acad. (Vigyan Parishad Pryag)* 52(4): 362. 2009. (BALSAMINACEAE)

Ipomoea laxiflora H.J. Chowdhery & Debta, *Indian J. Forest.* 32(1): 120. 2009. (CONVOLVULACEAE)

Leucas mathewiana Sunojk., *Candollea* 64(1): 46.2009. (LAMIACEAE)

Lindera sanjappae M. Bhaumik, M.K. Pathak & Chakrab., *J. Econ. Taxon. Bot.* 33(3): 657. 2009. (LAURACEAE)

Lindera vermae M.K.Pathak, M.Bhaumik & Chakrab., *J. Econ. Taxon. Bot.* 33(3): 658. 2009. (LAURACEAE)

Luzula brevispicata Knjaz., *Novosti Sist. Vyssh. Rast.* 40: 35. 2008 [publ. 30 Mar. 2009.] (JUNCACEAE)

Mussaenda nicobarica Shimpale, S. R. Yadav & Babu, *Rheedea* 19 (1&2): 53. 2009. (RUBIACEAE)

Neolitsea gamblei Chakrab. & P.G. Diwakar, *J. Econ. Taxon. Bot.* 33(2): 345. 2009. (LAURACEAE)

Neolitsea sanjappae M.K. Pathak, M. Bhaumik & Chakrab., *J. Econ. Taxon. Bot.* 33(3): 658. 2009. (LAURACEAE)

Oreocome aegopodioides Pimenov & Kljuykov, *Willdenowia* 39(1): 95. 2009. (APIACEAE)

Panax sokpayensis Shiva K. Sharma & Pandit, *Syst. Bot.* 34(2): 434. 2009. (ARALIACEAE)

Phoebe palghatensis M. Gangop. *Bangladesh J. Plant Taxon.* 16(2): 146. 2009. (LAURACEAE)

Phyllanthus rangachariarii C. Murugan, K.A.A. Kabeer & G.V.S. Murthy, *Bull. Bot. Surv. India* 50: 201. 2009. (EUPHORBIACEAE)

Pogostemon manipurensis V.S. Kumar, *Phytotaxonomy* 8: 21.2009. (LAMIACEAE)

Saurauia nicobarica T.K. Paul, *J. Jap. Bot.* 84(4): 229. 2009. (ACTINIDIACEAE)

Saurauia parasnathensis Ranjan & S.K. Srivast., *J. Jap. Bot.* 84(4): 233. 2009. (ACTINIDIACEAE)

Saxifraga assamensis B.M. Wadhwa, *Bull. Bot. Surv. India* 50: 205. 2009. (SAXIFRAGACEAE)

Sonerila anaimudica Lundin & B. Nord., *Novon* 19(1): 76. 2009. (MELASTOMATACEAE)

Sonerila coriacea Lundin & B. Nord., *Novon* 19(1): 77. 2009. (MELASTOMATACEAE)

Strobilanthes borii J.R.I. Wood, *Kew Bull.* 64(1): 25. 2009. (ACANTHACEAE)

Strobilanthes parvifolia J.R.I. Wood, *Kew Bull.* 64(1): 25. 2009. (ACANTHACEAE)

Strobilanthes pothigaiensis Gopalan & Chithra, Kew Bull. 63(3): 499. 2009. (ACANTHACEAE)

Teucrium ramaswamii M.B. Viswan. & Manik., Nordic J. Bot. 27(2): 86 (-89; fig. 1). 2009. (LAMIACEAE)

Tinospora formanii Udayan & Pradeep, Edinburgh J. Bot. 66(1): 77 (-80; fig. 1). 2009. (MENISPERMACEAE)

Tripogon borii K.A.A. Kabeer, V.J. Nair & G.V.S. Murthy, Bull. Bot. Surv. India 50:115-118. 2009. (POACEAE)

Vaccinium amakhangium S. Panda & M. Sanjappa, Bull. Bot. Surv. India 50: 1. 2009. (ERICACEAE)

Vanda motesiana Choltco, Orchid Rev. 117(1287): 148. 2009. (ORCHIDACEAE)

NEW NOTHOSPECIES

Populus x **kashmirica** A.K.Skvortsov, Novosti Sist. Vyssh. Rast. 40: 63. 2008 [publ. 2009.] (SALICACEAE)

NEW VARIETIES

Actephila excelsa (Dalzell) Muell.-Arg. var. **brevifolia** N.Balach., B.Maheswaran & Chakrab., J. Econ.Taxon. Bot. 33(3): 717. 2009. (EUPHORBIACEAE)

Apollonias arnotii Nees var. **beddomei** M. Gangop. Bangladesh J. Plant Taxon. 16(2): 141. 2009. (LAURACEAE)

Fimbristylis ligulata Govind. var. **kanaraensis** R.I. Shaikh & S.N. Solanke, Bioinfolet, 6(3): 201. 2009. (CYPERACEAE)

Fimbristylis ligulata Govind. var. **rohaensis** R.I. Shaikh & S.N. Solanke, Bioinfolet, 6(3): 203. 2009. (CYPERACEAE)

Microstegium vimineum (Trin.) A. Camus var. **loharkhetianum** Kandwal & B.K. Gupta, Indian J. Forest. 32(1): 171. 2009. (POACEAE)

Pedicularis pectinata Wall. var. **rosea** P Agnihotri & T. Husain, Phytotaxonomy 8:18. 2008 [publ. 30 Sep. 2009.] (SCROPHULARIACEAE)

Persea macrantha (Nees) Kosterm. var. **brevifolia** M. Gangop. Bangladesh J. Plant Taxon. 16(2): 144. 2009. (LAURACEAE)

NEW DISTRIBUTION RECORDS

Cleistanthus robustus Muell.-Arg. (EUPHORBIACEAE) published by R. Sumathi, J. Jayanthi, K. Karthigeyan and D. Narasimhan in Rheedeia 19 (1 & 2): 69-71. 2009.

Delphinium nordhagenii Wendelbo (RANUNCULACEAE) published by D.K. Singh and Pusalkarin Bull. Bot. Surv. India 50:183. 2009.

Gymnocladus burmanicus C.E. Parkinson (LEGUMINOSAE-PAPILIONOIDEAE) published by R.K. Singh, R.C. Srivastava, and T.K. Mukherjee in Ind. J. Trad. Knowl. 8(4): 482-484. 2009.

Gynura amplexicaulis Oliv. & Hiern (ASTERACEAE) published by M.Y. Bachulkar and D.G. Jagtap in Rheedeia 19 (1 & 2): 59-60. 2009.

Impatiens harae H. Ohba & S. Akiyama var. **micrantha** (Hara) H. Ohba & S. Akiyama (BALSAMINACEAE) published by Pusalkar and D.K. Singh in Ann. For. 17(1):113-116.2009.

Lindera cercidifolia Hemsl. (LAURACEAE) published by A.A. Ansari in Bull. Bot. Surv. India 50:156. 2009.

Ruellia brittoniana Leonard (ACANTHACEAE) published by S. Kumar & C. Murugan in Journal of Indian Botanical Society 88: 100-102. 2009.

Ruellia elegans Hook. (ACANTHACEAE) published by S. Kumar & C. Murugan in Journal of Indian Botanical Society 88: 100-102. 2009.

Saussurea forrestii Diels (ASTERACEAE) published by Pusalkar and D.K. Singh in Rheedeia 19(1& 2): 61-63. 2009.

Scolopia pusilla (Gaertn.) Willd. (FLACOURTIACEAE) published by R. Sumathi, J. Jayanthi, K. Karthigeyan and D. Narasimhan in Rheedeia 19(1& 2): 69-71. 2009.

Sesbania sericea (Willd.) Link (LEGUMINOSAE-PAPILIONOIDEAE) published by M. Mohanan & J.V. Sudhakar in Bull. Bot. Surv. India 50:171-172. 2009.

Sidastrum micranthum (A. St.-Hil.) Fryxell (MALVACEAE) published by Vinod B. Shimpale, S.P. Sutar and S.R. Yadav in Rheedeia 19(1 & 2): 50-52. 2009.

Zingiber parishii Hook.f. (ZINGIBERACEAE) published by M. Sabu, V.P. Thomas and M.C. Shameer in Acta Botanica Hungarica 51(3-4): 363-366. 2009.

Ferns (Pteridophytes) live in a wide variety of habitats and often succeed in places where environmental factors discourage growth of flowering plants.

The Indian ferns account for about 12 per cent of the total fern species of the world.

In the present state of our knowledge India has about 1,200 species of ferns. Many more are yet to be identified and described.

The collated information presented here includes new distribution records of two species for India.

Thelypteris ratnapuræ Fraser Jenk. (THELYPTERIDACEAE) published by Anjali Biswas in Bull. Bot. Surv. India 50: 207 - 208. 2009.

Aleuritopteris tamburii (Hook.)Ching(PTERIDACEAE) published by B.S. Kholia and A.A. Ansari in Natl. Acad. Sci. lett. 32(7&8): 227-230. 2009.

Bryophytes have long been considered the simplest group of land plants.

Liverworts are thought to be the earliest-diverging branch of land plants, followed by mosses, followed by the "hornworts and vascular plants" which are therefore considered "sister groups".

An interesting morphological characteristic that may have a common origin in the hornworts and vascular plants is the indeterminate growth of the sporophyte.

During 2009

02 new generic distributional record and 18 new species distribution records of bryophytes have been published from India.

New Distribution Records

GENUS RECORDS

SACCOGYNIIDIUM Grolle (HEPATICAЕ: GEOCALYCACEAE) published by D.K. Singh & D. Singh in Journal of Bryology 31: 50-54. 2009.

STENOLEJUNEA R.M. Schust (HEPATICAЕ: LEJEUNEACEAE) published by Monalisa Dey, Devendra Singh and D.K. Singh in Indian Journal of Forestry 32(4): 669-684. 2009.

SPECIES RECORDS

Caudalejeunea lehmanniana (Gottsche) A. Evans (LEJEUNEACEAE) published by Monalisa Dey and D.K. Singh in Indian Journal of Forestry 32(4): 653-66. 2009.

Cololejeunia distalopapillata (E.M. Jones) R.M. Schust (HEPATICAЕ: LEJEUNEACEAE) published by A.E.D. Daniels and P. Daniel in Acta Botanica Hungarica 51(1-2): 61-66. 2009.

Cololejeunea longiana Grolle & Mizut. (HEPATICAЕ: LEJEUNEACEAE) published by Monalisa Dey and D.K. Singh in Bull. Bot. Surv. India 50: 209-211. 2009.

Cololejeunia vidalianaTixier (HEPATICAЕ: LEJEUNEACEAE) published by A. E. D. Daniels and P. Daniel in Acta Botanica Hungarica 51(1-2): 61-66. 2009.

Drepanolejeunea fleischeri (Steph.) Grolle & Zhu (HEPATICAЕ: LEJEUNEACEAE) published by Geeta Asthana and A. Shukla in Journal of Bryology 31: 139-142. 2009.

Drepanolejeunea pentadactyla (Mont.) Steph. (HEPATICAЕ: LEJEUNEACEAE) published by Geeta Asthana and A. Shukla in Journal of Bryology 31: 139-142. 2009.

Geocalyx lancistipulus (Steph.) S. Hatt. (GEOCALYCACEAE) published by Geeta Asthana and Murti in The Bryologist, 112(2): 359-362. 2009.

Herbartus armitanus (Steph.) H.A. Mill (HERBERTACEAE) published by Monalisa Dey, Devendra Singh and D.K. Singh in Indian Journal of Forestry 32(4) : 669-604. 2009.

Herbertus longispinus J.B. Jack & Steph. (HERBERTACEAE) published by Monalisa Dey, Devendra Singh and D.K. Singh in Indian Journal of Forestry 32(4): 669-604. 2009.

Isotachis japonica Steph., (BALANTIOPSACEAE) published by Devendra Singh and D.K. Singh in Indian Journal of Forestry 32(3): 501-504. 2009.

Jungermannia obliquifolia (Schiffn) Vana (HEPATICAЕ: JUNGERMANNIACEAE) published by C.N Manju, K.P Rajesh and P.V. Madhusoodanan in Bangladesh Journal of Plant Taxonomy 16(1): 95-97. 2009.

Lejeunea papilionacea Steph. (HEPATICAЕ: LEJEUNEACEAE) published by Devendra Singh, Monalisa Dey and D.K. Singh in Bull. Bot. Surv. India 50: 212- 215. 2009.

Lejeunea sordida (Nees) Nees (LEJEUNEACEAE) published by Monalisa Dey, Devendra Singh and D.K. Singh in Indian Journal of Forestry 32(4): 669-604. 2009.

Orthotrichum hispanicum F. Lara, Garilleti & Mazimpaka (ORTHOTRICHACEAE) published by Garilleti, R. Medina, Mazimpaka & F. Lara in Journal of Bryology 31: 46-47. 2009.

Riccia haskarliana Steph. (RICCIAEAE) published by Monalisa Dey, Devendra Singh and D.K. Singh in Indian Journal of Forestry 32(4): 669-684. 2009.

Saccogynidium irregularospinum C.H. Gao, T. Cao & M.J. Lai(GEOCALYCACEAE) published by D.K. Singh & Devendra Singh in Journal of Bryology 31: 50-54. 2009.

Spruceanthus thozetianus (Gottsche & F.A. Mull.) B. Theirs. & Gradst (HEPATICAЕ: LEJEUNEACEAE) published by A. E. D. Daniels and P. Daniel in Acta Botanica Hungarica 51(3-4): 283-287. 2009.

Stenolejeunea apiculata (Sande Lac.) R.M. Schust. (LEJEUNEACEAE) published by Monalisa Dey, Devendra Singh and D.K. Singh in Indian Journal of Forestry 32(4): 669-604. 2009.

Lichens were a component of the early terrestrial ecosystems, and the estimated age of the oldest terrestrial lichen fossil is 400 Ma.

During 2009

30 new species (12 from Maharashtra, 10 from West Bengal, 01 from Meghalaya, 02 from Tamil Nadu, 02 from Sikkim, and 01 each from Himachal Pradesh and Manipur) and 01 genus and 8 species as new distribution records of lichens have been published from India.

NEW SPECIES

Caioplaca himalayana Y. Joshi & Upreti, Lichenologist 41(3): 250. 2009. (TELOSCHISTACEAE)

Cryptothecia alboglauca Jagadeesh & al., Lichenologist 41(6): 605. 2009. (TELOSCHISTACEAE)

Cryptothecia bengalensis Jagadeesh & al., Lichenologist 41(6): 608. 2009. (ARTHONIAACEAE)

Cryptothecia farinosa Jagadeesh & al., Lichenologist 41(6): 608. 2009. (ARTHONIAACEAE)

Cryptothecia multipunctata Jagadeesh & al., Lichenologist 41(6): 609. 2009. (ARTHONIAACEAE)

Cryptothecia verruculifera Jagadeesh & al., Lichenologist 41(6): 610. 2009. (ARTHONIAACEAE)

Diorygma albocinerascens Makhija & al., Mycotaxon 109: 381. 2009. (GRAPHIDACEAE)

Diorygma albovirescens Makhija & al., Mycotaxon 109: 382. 2009. (GRAPHIDACEAE)

Diorygma dealbatum B.O. Sharma & Makhija, Mycotaxon 107: 89. 2009. (GRAPHIDACEAE)

Diorygma excipuloconvergentum Makhija & al., Mycotaxon 109: 383. 2009. (GRAPHIDACEAE)

Diorygma inaequale B.O. Sharma & Makhija, Mycotaxon 107: 90. 2009. (GRAPHIDACEAE)

Diorygma longilirellatum B.O. Sharma & Makhija, Mycotaxon 109: 212. 2009. (GRAPHIDACEAE)

Diorygma manipurense B.O. Sharma & Makhija, Mycotaxon 107: 91. 2009. (GRAPHIDACEAE)

Diorygma megaspermum Makhija & al., Mycotaxon 109: 386. 2009. (GRAPHIDACEAE)

Diorygma megistosporum Makhija & al., Mycotaxon 109: 388. 2009. (GRAPHIDACEAE)

Diorygma microsporum Makhija & al., Mycotaxon 109: 390. 2009. (GRAPHIDACEAE)

Diorygma panchganiense Makhija & al., Mycotaxon 109: 389. 2009. (GRAPHIDACEAE)

Diorygma patwardhanii Makhija & al., Mycotaxon 109: 391. 2009. (GRAPHIDACEAE)

Diorygma saxicola B.O. Sharma & Makhija, Mycotaxon 109: 215. 2009. (GRAPHIDACEAE)

Diorygma verrucirimosum B.O. Sharma & Makhija, Mycotaxon 107: 92. 2009. (GRAPHIDACEAE)

Graphis neoraensis Jagadeesh & G.P. Sinha, Mycotaxon 110: 32. 2009. (GRAPHIDACEAE)

Hemithecium himalayanum Jagadeesh & G.P. Sinha, Mycotaxon 110: 34. 2009. (GRAPHIDACEAE)

- Hemithecium microspermum** G. Chitale & al., Mycotaxon 108: 86. 2009. (GRAPHIDACEAE)
- Herpothallon flavominutum** Jagadeesh, G.P.Sinha & Elix, Mycotaxon 110: 38. 2009. (GRAPHIDACEAE)
- Herpothallon granulosum** Jagadeesh & G.P. Sinha, Lichenologist 41(6): 610. 2009. (GRAPHIDACEAE)
- Herpothallon himalayanum** Jagadeesh & G.P. Sinha, Mycotaxon 110: 40. 2009. (GRAPHIDACEAE)
- Herpothallon isidiatum** Jagadeesh & G.P. Sinha, Lichenologist 41(6): 611. 2009. (GRAPHIDACEAE)
- Pallidogramme indica** A. Dube & Makhija in G. Chitale & al., Mycotaxon 108: 90. 2009. (GRAPHIDACEAE)
- Pallidogramme undulatoirellata** A. Dube & Makhija in G. Chitale & al., Mycotaxon 108: 91. 2009. (GRAPHIDACEAE)
- Ramboldia amarkantakana** Upreti & Nayaka, Mycotaxon 107: 240.2009. (LECANORACEAE)

NEW DISTRIBUTION RECORDS

GENUS

- ERYTHRODECTON** G. Thor (ROCCCELLACEAE) published by Kr. P. Singh & al., Indian J. Forest. 32(2): 335. 2009.

SPECIES

- Caloplaca alnetorum** Giralt & al. (TELOSCHISTACEAE) published by Y. Joshi & al., in Lichenologist 41(3): 251. 2009.
- Caloplaca crocea** (Kremp.) Hafellner & Poelt (TELOSCHISTACEAE) published by Y. Joshi & al., in Lichenologist 41(3): 251.2009.
- Erythrodecton malacum** (Kremp.) G. Thor (ROCCCELLACEAE) published by Kr. P. Singh & al., Indian J. Forest. 32(2): 335. 2009.
- Herpothallon albidum** (Fee) Aptroot, Lucking & G. Thor (ARTHONIACEAE) published by Jagadeesh & al. in Mycotaxon 110: 41. 2009.
- Herpothallon australasicum** (Elix) G. Thor (ARTHONIACEAE) published by Jagadeesh & al. in Lichenologist 41(6): 612. 2009.
- Herpothallon cinereum** G. Thor (ARTHONIACEAE) published by Jagadeesh & al. in Mycotaxon 110: 41. 2009.
- Herpothallon granulare** (Sipman) Aptroot & Lucking (ARTHONIACEAE) published by Jagadeesh & al. in Lichenologist 41(6): 612. 2009.
- Herpothallon philippinum** (Vain) Aptroot & Lucking (ARTHONIACEAE) published by Jagadeesh & al. in Mycotaxon 110: 41. 2009.

The **Fungi** - a large group of eukaryotic organisms that includes microorganisms such as yeasts and molds, as well as the more familiar mushrooms- are classified as a kingdom that is

separate from plants, animals and bacteria.

One major difference is that fungal cells have cell walls that contain chitin.

The discipline of biology devoted to the study of fungi is known as mycology, which is traditionally regarded as a branch of botany, even though genetic studies have shown that fungi are more closely related to animals than to plants.

Abundant worldwide, most fungi are inconspicuous because of the small size of their structures, and their cryptic lifestyles in soil, on dead matter, and as symbionts of plants, animals, or other fungi. They become visible when fruiting, either as mushrooms or molds. The fungi encompasses an enormous diversity of taxa with varied ecologies, life cycle strategies, and morphologies ranging from single-celled aquatic chytrids to large mushrooms.

However, little is known of the true biodiversity of Kingdom Fungi, which has been estimated at around 1.5 million species, with only about 5% of these having been formally classified.

During 2009

05 new genera from Kerala

58 new species (29 from Kerala, 07 from Madhya Pradesh, 07 from Meghalaya, 03 from Goa, 03 from Karnataka, 03 from Tamil Nadu, 02 from Andhra Pradesh, 01 each from Himachal Pradesh, Maharashtra, Uttarakhand and West Bengal)

01 variety from Kerala and

02 new generic records and 19 new species records have been published from India.

NEW GENERA

BRAMHAMYCES Hosag., Indian J. Sc. Tech. 2(6): 17. 2009. (COELOMYCETES)

CHASAKOPAMA C. Manohar, G. Bhagyan, N. Kr. Rao & I.K. Kunwar, Mycotaxon 110 : 459-463. 2009. (DIADEMACEAE)

MAHESHWARAMYCES Hosag., Indian J. Sc. Tech. 2 (6): 12. 2009. (LEMBOSIACEAE)

MANOHARACHARIELLA G. Bagyan. N. Kr. Rao & I.K. Kunwar, Mycotaxon 109: 301-305. 2009. (DIADEMACEAE)

RATTANIA A. Prabhu. D. J. Bhatt, Mycotaxon 108: 217-222. 2009. (HYPHOMYCETES)

NEW SPECIES

Asteridiella ficicola Hosag., G.R. Archana and T. Sabu, J. Threat. Taxa 1 (9): 474. 2009. (MELIOLACEAE)

Asteridiella kodaikanalensis Hosag., K. Ravikumar & G.R. Archana, J. Threat. Taxa 1(8): 434. 2009. (MELIOLACEAE)

Asteridiella phukanea Hosag., Jacob Thomas and P.J. Robin, Indian J. Sc. Tech. 2(6): 3. 2009 (MELIOLACEAE)

Asteridiella shenbaganurensis Hosag., K. Ravikumar & G.R. Archana, J. Threat. Taxa 1(8): 434. 2009. (MELIOLACEAE)

Asterina emcicana Hosag., P.J. Robin and G.R. Archana Sydowia 61: 246. 2009. (ASTERINACEAE)

- Asterina enicostemmatidis** Hosag. and A. Chandraprabha, Indian J. Sc. Tech. 2(6): 15. 2009. (ASTERINACEAE)
- Asterina mimusopsidicola** Hosag., A. Sabeena and D.K. Agarwal, Indian Phytopath. 62: 229. 2009. (ASTERINACEAE)
- Asterina psychotriicola** Hosag. and G.R. Archana, Indian J. Sc. Tech. 2(6): 1. 2009. (ASTERINACEAE)
- Asterina schimae** Hosag., Jacob Thomas and P.J. Robin, Indian J. Sc. Tech. 2(6): 2. 2009. (ASTERINACEAE)
- Asterina scleropyri** Hosag. and A. Chandraprabha, Indian J. Sc. Tech. 2(6): 16. 2009. (ASTERINACEAE)
- Asterostroma indicum** A.B. De, Mycotaxon. 109: 15-20. 2009. (LACHNOCIADIACEAE)
- Balladyna indica** Hosag., J. Threat. Taxa 1(7): 375. 2009. (PARODIOPSISIDACEAE)
- Balladyna salaciae** Hosag., Jacob Thomas, S.S. Shaji and P.P. Rajeshkumar, Indian J. Sc. Tech. 2(6): 8. 2009. (PARODIOPSISIDACEAE)
- Bramhamyces ilecis** Hosag. and Chandraprabha, Indian J. Sc. Tech. 2(6): 17. 2009. (COELOMYCETES)
- Chasakopama velgodensis** C. Manohar, G. Bhagyan, N.Kr. Rao & I.K. Kunwar, Mycotaxon 110: 459-463. 2009. (DIADEMACAEAE)
- Cladosporium foetidae** S. Lata, A.N. Rai & P. Mehta, J. Indian Bot. Soc. 88(1&2): 46. fig. 1. 2009. (HYPHOMYCETES)
- Cladosporium hibiscus-rosae** S. Lata, A.N. Rai. & P. Mehta, J. Indian Bot. Soc. 88(1&2): 47. fig.2. 2009. (HYPHOMYCETES)
- Curvularia steveae** R. Dubey & Akhil. K. Pandey, J. Indian Bot. Soc. 88(1&2): 98. fig. 1. 2009. (HYPHOMYCETES)
- Digitoramispora tambdisurlensis** J. Pratibha, S. Raghu & D.J. Bhat, Mycotaxon 107:383-390. 2009. (PZIZOMYCOTINA)
- Dimastigosporium yanense** S. Yadav & D.J. Bhat, Mycotaxon 107: 397-403. 2009. (PZIZOMYCOTINA)
- Echinosphaeria pteridis** S. Dhargalkar & D.J. Bhat, Mycotaxon 108: 115-122. 2009. (HELMINTHOSPHAERIAEAE)
- Gonatophragmium mayteni** S.K. Singh, L.S. Yadav & P.N. Singh, Mycotaxon 110: 184. 2009. (SCROSPERMACEAE)
- Hyphoderma singudaribisidium** G.S. Dhingra, A.P. Singh & N. Singla, Mycotaxon 108: 197-199. 2009. (MERULIACEAE)
- Lembosia humboldtiicola** Hosag., Jacob Thomas and A. Sabeena, Indian J. Sc. Tech. 2(6): 20. 2009. (ASTERINACEAE)
- Lembosia humboldtiigena** Hosag., Jacob Thomas and A. Sabeena, Indian J. Sc. Tech. 2(6): 20. 2009. (ASTERINACEAE)
- Lembosia salaciae** Hosag. and G.R. Archana, Indian J. Sc. Tech. 2(6): 1. 2009. (ASTERINACEAE)
- Lomachashaka gomaya** S. Yadav & D.J. Bhat, Mycoaxon 110: 357-361. 2009. (PZIZOMOICOTINA)

- Maheshwaramyces pachygonus** Hosag., Indian J. Sc. Tech. 2(6): 12. 2009. (LEMBOSIACEAE)
- Manoharachariella lignicola** G. Bagyan., N.Kr. Rao and I.K. Kunwar, Mycotaxon 109:301-305.2009. (DIADEMACEAE).
- This new species anamorphic dematiaceous hyphomycetous was collected on dead twigs in a forest near Darakonda, Andhra Pradesh. The original collection is deposited in IML.
- Meliola aristolochigena** Hosag. and G.R.Archana, J.Threat. Taxa 1(6): 348. 2009. (MELIOLACEAE)
- Meliola dioscoreacearum** Hosag. and J. Thomas, Indian J. Sc. Tech. 2(6): 22. 2009. (MELIOLACEAE)
- Meliola dioscoregena** Hosag. and J.Thomas, Indian J. Sc. Tech. 2(6): 22. 2009. (MELIOLACEAE)
- Meliola erumeliensis** Hosag., G.R. Archana, M. Rajendraprasad & A. Nazarudeen, J. Threat. Taxa 1(6): 347. 2009. (MELIOLACEAE)
- Meliola meghalayensis** Hosag., Jacob Thomas and P.J. Robin, Indian J. Sc. Tech. 2(6): 3. 2009. (MELIOLACEAE)
- Meliola pycnosporae** Hosag. and G.R. Archana, J. Threat. Taxa 1(6): 348. 2009. (MELIOLACEAE)
- Meliola sairandhrana** Hosag. and G.R. Archana, J. Threat. Taxa 1(6): 348. 2009. (MELIOLACEAE)
- Meliola shillongensis** Hosag., J. Thomas and P.J. Robin, Indian J. Sc. Tech. 2(6): 4. 2009. (MELIOLACEAE)
- Meliola strebli** Hosag. and G.R. Archana, J. Threat. Taxa 1(6): 349. 2009. (MELIOLACEAE)
- Meliola vatsavayai** Hosag. and M.C. Riju, Indian J. Sc. Tech. 2 (6): 25. 2009. (MELIOLACEAE)
- Meliola vazhachalensis** Hosag. and J. Thomas, Indian J. Sc. Tech. 2(6): 24. 2009. (MELIOLACEAE)
- Meliolaster aporusae** Hosag., M.Harish and G.R. Archana, Indian J. Sc. Tech. 2(6): 14. 2009. (ASTERINACEAE)
- Prillieuxina diospyri** Hosag. & Chandraprabha, Indian J. Sc. Tech. 2(6): 18. 2009. (ASTERINACEAE)
- Prillieuxina ixorigena** Hosag. & Chandraprabha, Indian J. Sc. Tech. 2(6): 18. 2009. (ASTERINACEAE)
- Pseudocercospora mitragynae** S. Lata, A.N. Rai & P. Mehta, J. Indian Bot. Soc. 88(1&2): 51. fig. 3. 2009. (HYPHOMYCETES)
- Questieriella zanthoxyli** Hosag., J. Thomas and P.J. Robin, Indian J. Sc. Tech. 2(6): 4. 2009. (HYPHOMYCETES)
- Rattania setulifera** A. Prabhugaonkar & D.J. Bhat, Mycotaxon 108: 217-222. 2009. (ESCOMYCOTA)
- Sarcinella castanopsidis** Hosag., J. Thomas and P.J. Robin, Indian J. Sc. Tech. 2(6): 5. 2009. (HYPHOMYCETES)
- Sarcinella cipadessae** Hosag. and J. Thomas, Indian J. Sc. Tech. 2(6): 26. 2009. (HYPHOMYCETES)
- Sarcinella ebenacearum** S.Lata, A.N. Rai & P. Mehta, J. Indian Bot. Soc. 88(1&2): 52-53.

fig.4. 2009. (HYPHOMYCETES)

Sarcinella lyoniae Hosag., J. Thomas and P.J. Robin, Indian J. Sc. Tech. 2(6): 5. 2009. (HYPHOMYCETES)

Sarcinella quisqualidis Hosag. and J. Thomas, Indian J. Sc. Tech. 2(6): 26. 2009. (HYPHOMYCETES)

Schiffnerula canthii Hosag. and G.R. Archana, J. Threat. Taxa 1(7): 378. 2009. (ENGLERULACEAE)

Schiffnerula terminaliae Hosag. and M.C. Riju, Indian J. Sc. Tech. 2(6): 8. 2009. (ENGLERULACEAE)

Spondylocladiopsis aseptata J. Pratibha, S. Raghu. & D.J. Bhat, Mycotaxon 107: 383-390. 2009. (PEZIZOMYCOTINA)

Stenella moracearum S. Lata, A.N. Rai & P. Mehta, J. Indian Bot. Soc. 88(1&2): 53-54. fig.5. 2009. (HYPHOMYCETES)

Stigmina fabacearum S. Lata, A.N. Rai & P. Mehta, J. Indian Bot. Soc. 88(1&2): 54-55. fig. 6. 2009. (HYPHOMYCETES)

Symphaster mimusopsidis Hosag., A. Sabeena and D.K. Agarwal, Indian Phytopath. 62: 230. 2009. (ASTERINACEAE)

Tetracladium nainitalense Sati & P. Arya, Mycologia, 101(5), 2009 DOI: 10.3852/08-192. (HYPHOMYCETES)

NEW VARIETY

Asterina lobulifera Sydow var. **indica** Hosag. and A. Chandraprabha, Indian J. Sc. Tech. 2(6): 15. 2009. (ASTERINACEAE)

NEW DISTRIBUTION RECORDS

GENUS

CONIOPHORELLA Karst. (CONIPHORACEAE) published by G.S. Dhingra and Avneet P. Singh in Journal of Indian Botanical Society, 88(1 & 2): 122-127. 2009.

HANSFORDIELLOPSIS (Bat. & H.Maia) Deighton (HYPHOMYCETES) published by V.B. Hosagoudar in J. Threatened Taxa 1(7): 376. 2009.

SPECIES

Coniophora fusispora (Cooke & Ell.) Cook (CONIPHORACEAE) published by G.S. Dhingra and Avneet P. Singh in Journal of Indian Botanical Society, 88 (1 & 2): 122-127. 2009.

Coniophora viridis (Berk.) Sacc. (CONIPHORACEAE) published by G.S.Dhingra and Avneet P. Singh in Journal of Indian Botanical Society, 88 (1 & 2): 122-127.2009.

Coniophorella olivacea (Fr.) Karst. (CONIPHORACEAE) published by G.S. Dhingra and Avneet P. Singh in Journal of Indian Botanical Society, 88(1 & 2): 122-127. 2009.

Dictyotherium hironymi (Rehm.) Bat. (PLEOSPORALES) published by L.S. Jadhav and A.B. Pawar in Bioinfolet, 6(3): 208-212. 2009.

Didimella umbelliferaceum Bauml. (PLEOSPORALES) published by L.S. Jadhav and A.B.

Pawar in Bioinfolet, 6(3): 208-212. 2009.

Domingoella asterinarum Petrak & Ciferri (HYPHOMYCETES) published by V.B. Hosagoudar and G.R. Archana in J. Threatened Taxa 1(8): 437. 2009.

Dysrhynchis palmicola (Sydow) Arx (PARODIOPSISIDACEAE) published by V.B. Hosagoudar and M.C. Riju in Indian J. Sc. Tech. 2 (6): 10. 2009.

Hansfordiella meliolae (Hansf.) Hughes (HYPHOMYCETES) published by V.B. Hosagoudar and G.R. Archana in J. Threatened Taxa 1(8): 437. 2009.

Micropeltis aqualies Syd. (MICROPELTIDACEAE) published by L.S.Jadhav and A.B. Pawar in Bioinfolet, 6(3): 208-212. 2009.

Micropeltis eryliphoides Rehm & Hedw. (MICROPELTIDACEAE) published by L.S. Jadhav and A.B. Pawar in Bioinfolet, 6(3): 208-212. 2009.

Micropeltis umbilicate Mont. (MICROPELTIDACEAE) published by L.S. Jadhav and A.B. Pawar in Bioinfolet 6(3): 208-212. 2009.

Mycosphaerella euphorbiae Nissler & Schrot (MYCOSPHAERELLACEAE) published by L.S. Jadhav and A.B. Pawar in Bioinfolet, 6(3): 208-212. 2009.

Schiffnerula brideliae Hansford (ENGLERULACEAE) published by V.B. Hosagoudar and M.C. Riju in Indian J. Sc. Tech. 2(6): 7.2009.

Schiffnerula ricini Hansf. (ENGLERULACEAE) published by V.B. Hosagoudar and M.C. Riju in Indian J. Sc. Tech. 2(6): 7. 2009.

Sistotrema brinkmannii (Bres.) John Erikss. (SISTOREMATAACEAE) published by G.S. Dhingra, Priyanka and Avneet Pal Singh in Journal of Indian Botanical Society, 88(1&2): 76-79. 2009.

Sistotrema sernanderi (Litsch.) Donk (SISTOREMATAACEAE) published by G.S. Dhingra, Priyanka and Avneet Pal Singh in Journal of Indian Botanical Society, 88(1&2): 76-79. 2009.

Sistotrema subtrigonospermum Rogers (SISTOREMATAACEAE) published by G.S. Dhingra, Priyanka and Avneet Pal Singh in Journal of Indian Botanical Society, 88 (1&2): 76-79.2009.

Sporidesmium aburiense M.B. Ellis (HYPHOMYCETES) published by V.B. Hosagoudar in J. Threatened Taxa 1(7): 377. 2009.

Stomiopeltis suttoniae (Mendoza) Luttrell. (MICROPELTIDACEAE) published by L.S. Jadhav and A.B. Pawar in Bioinfolet, 6(3): 208-212. 2009.

Algae are large and diverse group of simple, typically autotrophic organisms from unicellular to multicellular forms.

Though algae are becoming more and more open to exploitation worldwide, knowledge on algae is probably very elementary in India. The Indian algae account for about 17 per cent of the total species of the world.

In the present state of our knowledge India has about 7,175 species of algae. Many more are yet to be identified and described.

The collated information presented here includes 04 new species of algae from Kerala, India and 01 new distributional record for India.

NEW SPECIES

Feldmannia renienii P.S. Nettar & M.V.N. Panikkar, Seaweed Res. Utiln. 31: 13. 2009.

(PHAEOPHYCEAE)

Feldmannia sahnienii P.S.Nettar & M.V.N.Panikkar, Seaweed Res. Utiln. 31: 12. 2009.

(PHAEOPHYCEAE)

Haplospogon thirumullavaramensis P.S. Nettar & M.V.N. Panikkar, Seaweed Res. Utiln. 31: 7-10. 2009. (RALFSIACEAE)

Pseudolithoderma thangasseriensis P.S. Nettar & M.V.N. Panikkar, Seaweed Res. Utiln. 31: 7-10. 2009. (RALFSIACEAE)

NEW DISTRIBUTION RECORD

SPECIES

Hincksia rallisiae (Vickers) Silva & al. (PHAEOPHYCEAE) published by P.S. Nettar and M.V.N. Panikkar, in Seaweed Res. Utiln. 31: 19. 2009.

Microbes

Of the estimated 50,000 - 3,000,000 species of bacteria and archaea, only about 8050 species have been described globally. About 900 species have been isolated from different environments and described in India. It is necessary to understand the diversity of bacteria and archaea present in a great variety of Indian environments, and understand their role in nature.

In the present state of our knowledge, Indian microbes represent about 11% of the total species of the world.

The collated information presented here includes 04 new genera 39 new species of microbes from India.

NEW GENERA

BHARGAVAEA R. Manorama, P.K. Pindi, G.S.N. Reddy and S. Shivaji, Int. J. Syst. Evol. Microbiol. 59: 2618-2623. 2009. (FIRMICUTES)

INDIBACTER P.Anil Kumar, T.N.R. Srinivas, S. Madhu, R. Ruth Manorama and S. Shivaji, Int. J. Syst. Evol. Microbiol. 2009. DOI 10.1099/ijs.0.014076-0. (BACTEROIDETES)

NITRITALEA P. Anil Kumar, T.N.R. Srinivas, P. Pavan Kumar, S. Madhu and S. Shivaji, Int. J. Syst. Evol. Microbiol. 59: 2009. (BACTEROIDETES)

PAENISPOROSARCINA S. Krishnamurthi, A. Bhattacharya, S. Mayilraj, P. Saha, P. Schumann and T. Chakrabarti, Int. J. Syst. Evol. Microbiol. 59: 1364-1370. 2009. (FIRMICUTES)

NEW SPECIES

Allochroatrium phaeobacterium T.N.R. Srinivas, P. Anil Kumar, K. Sucharitha, Ch. Sasikala and Ch. V.Ramana Int. J. Syst. Evol. Microbiol. 59: 750. 2009; DOI 10.1099/ijs.0.65647-0. (PROTEOBACTERIA)

Bacillus aryabhatai S. Shivaji, Preeti Chaturvedi, Zareena Begum, Pavan Kumar Pindi, R. Manorama, D. Ananth Padmanaban, Yogesh S. Shouche, Shrikant Pawar, Parag Vaishampayan, C.B.S. Dutt, G.N. Datta, R.K. Manchanda, U.R. Rao, P.M. Bhargava and J.V. Narlikar, Int. J. Syst. Evol. Microbiol. 59: 2009. (FERMICUTES)

Bacillus isronensis S. Shivaji, Preeti Chaturvedi, Zareena Begum, Pavan Kumar Pindi, R. Manorama, D. Ananth Padmanaban, Yogesh S. Shouche, Shrikant Pawar, Parag Vaishampayan, C.B.S. Dutt, G.N. Datta, R.K. Manchanda, U.R. Rao, P.M. Bhargava and J.V. Narlikar, *Int. J. Syst. Evol. Microbiol.* 59: 2009. (FERMICUTES)

Bhargavaea cecembensis R. Manorama, P.K. Pindi, G.S.N. Reddy and S. Shivaji, *Int. J. Syst. Evol. Microbiol.* 59: 2618-2623. 2009. (FIRMICUTES)

Chryseobacterium arthrosphaerae Peter Kampfer, A.B. Arun, Chiu-Chung Young, Wen-Ming Chen, K.R. Sridhar and P.D. Rekha, *Int. J. Syst. Evol. Microbiol.* (2009); DOI 10.1099/ijs.0.016840-0. (BACTEROIDETES)

Chryseobacterium culicis Peter Kampfer, Kshitij Chandel, G.P.K.S. Prasad, Y.S. Shouche and Vijay Veer. *Int. J. Syst. Evol. Microbiol.* (2009); DOI 10.1099/ijs.0.019794-0. (BACTEROIDETES)

Cryobacterium roopkundense G.S.N. Reddy, Suman Pradhan, Ruth Manorama and Sisinthy Shivaji, *Int. J. Syst. Evol. Microbiol.* 59: 2009. (ACTINOBACTERIA)

Deinococcus piscis Ravindranath Shashidhar and Jayant R. Bandekar, *Int. J. Syst. Evol. Microbiol.* 59: 2714-2717. 2009. (BACTERIA)

Devosia albogilva Mansi Verma, Mukesh Kumar, Mandeep Dadhwal, Jaspreet Kaur and Rup Lai, *Int. J. Syst. Evol. Microbiol.* 59: 795-799. 2009. (PROTEOBACTERIA)

Devosia crocina Mansi Verma, Mukesh Kumar, Mandeep Dadhwal, Jaspreet Kaur and Rup Lai, *Int. J. Syst. Evol. Microbiol.* 59: 795-799. 2009. (PROTEOBACTERIA)

Flavobacterium glycinis Munusamy Madhaiyan, Selvaraj Poonguzhali, Jung-Sook Lee, Keun-Chul Lee and Subbiah Sundaram, *Int. J. Syst. Evol. Microbiol.* 59: 2009. (BACTEROIDETES)

Georgenia soli Peter Kampfer, A.B.Arun, H.J. Busse, S. Langer, C.C. Young, W.M. Chen, P. Schumann, A. A. Syed and P.D. Rekha, *Int. J. Syst. Evol. Microbiol.* 59: 2009. (ACTINOBACTERIA)

Gulbenkiania indiensis V.Jyoti, Kunwar Digvijay Narayan and Subrata K.Das, *Int. J. Syst. Evol. Microbiol.* 59: 2009. (PROTEOBACTERIA)

Indibacter alkaliphilus P.Anil Kumar, T.N.R.Srinivas, S.Madhu, R.Ruth Manorama and S.Shivaji. (BACTEROIDETES)

Janibacter hoylei S. Shivaji, Preeti Chaturvedi, Zareena Begum, Pavan Kumar Pindi, R. Manorama, D. Ananth Padmanaban, Yogesh S. Shouche, Shrikant Pawar, Parag Vaishampayan, C.B.S. Dutt, G.N. Datta, R.K. Manchanda, U.R. Rao, P.M. Bhargava and J.V. Narlikar, *Int. J. Syst. Evol. Microbiol.* 59: 2977-2986. 2009. (FERMICUTES)

Leifsonia kafniensis Pavan Kumar Pindi, K.Hara Kishore, G.S.N. Reddy and S. Shivaji, *Int. J. Syst. Evol. Microbiol.* 59: 1348-1352. 2009. (ACTINOBACTERIA)

Microbacterium azadirachtae Munusamy Madhaiyan, Selvaraj Poonguzhali, Jung-Sook Lee, Keun-Chul Lee, Venkatakrishnan Sivaraj Saravanan and Palani Santhanakrishnan, *Int. J. Syst. Evol. Microbiol.* 59: 2009. (PROTEOBACTERIA)

Microbacterium lindanitolerans Devi Lai, Sanjay Kumar Gupta, Peter Schumann and Rup Lai, *Int. J. Syst. Evol. Microbiol.* 59: 2009. (ACTINOBACTERIA)

Nitritalea halalkaliphila P. Anil Kumar, T.N.R. Srinivas, P. Pavan Kumar, S. Madhu and S. Shivaji, *Int. J. Syst. Evol. Microbiol.* 59: 2009. (BACTEROIDETES)

Novosphingobium mathurense Sanjay Kumar Gupta, Devi Lai and Rup Lai, *Int. J. Syst. Evol.*

Microbiol. 59: 156-161. 2009. (PROTO BACTERIA)

Novosphingobium panipatense Sanjay Kumar Gupta, Devi Lai and Rup Lai, Int. J. Syst. Evol. Microbiol. 59:156-161. 2009. (PROTOBACTERIA)

Paenibacillus glacialis K. Hara Kishore, Zareena Begum, Akbar Ali Khan Pathan and S.Shivaji, Int. J. Syst. Evol. Microbiol. (2009). DOI 10.1099/ijs.0.015271-0. (FERMICUTES)

Paenisporosarcina quisquiliarum S. Krishnamurthi, A. Bhattacharya, S. Mayilraj, P. Saha, P. Schumann and T. Chakrabarti, Int. J. Syst. Evol. Microbiol. 59: 1364-1370. 2009. (FERMICUTES)

Phaeospirillum chandramohanii P.Anil Kumar, T.N.R. Srinivas, S. Takaichi, T. Maoka, Ch. Sasikala and Ch. V. Ramana, Int. J. Syst. Evol. Microbiol. 59: 2089-2093. 2009. (PROTOBACTERIA)

Rhodobacter aestuarii V. Venkata Ramana, P. Anil Kumar, T.N.R. Srinivas, Ch. Sasikala and Ch. V. Ramana, Int. J. Syst. Evol. Microbiol. 59: 1133-1136. 2009. (PROTOBACTERIA)

Rhodobacter johrii K.R. Girija, Ch. Sasikala, Ch. V. Ramana, C. Sproer, S. Takaichi, V. Thiel and J.F. Imhoff, Int. J. Syst. Evol. Microbiol. 59: 2009. (PROTOBACTERIA)

Rhodopianes pokkaliisoli K.V.N.S. Lakshmi, Ch. Sasikala and Ch. V. Ramana, Int. J. Syst. Evol. Microbiol. 59 (2009), 2153-2157; DOI 10.1099/ijs.0.008185-0. (PROTOBACTERIA)

Rhodovulum lacipunicei S. Kalyan Chakravarthy, K. Sucharitha, Ch. Sasikala and Ch. V. Ramana, Int. J. Syst. Evol. Microbiol. 59: 1615. 2009. (RHODOBACTERACEAE)

Shewanella chilikensis K. Sucharita, Ch. Sasikala, S.C. Park, K.S. Baik, C.N. Seong and Ch. V. Ramana, Int. J. Syst. Evol. Microbiol. 59: 3111-3115. 2009. (PROTOBACTERIA)

Shewanella fodinae R. Kumar Sravan, T.S. Sasi Jyothsna, Ch. Sasikala, C.N. Seong, C.H. Lim, C.P. Seong and Ch. V. Ramana, Int. J. Syst. Evol. Microbiol. (2009). doi:doi:10.1099/ijs.0.017046-0. (PROTEOBACTERIA)

Sphingobium chinhatense Mandeep Dadhwal, Simran Jit, Hansi Kumari and Rup Lai, Int. J. Syst. Evol. Microbiol. 59:3140-3144. 2009. (PROTOBACTERIA)

Sphingobium lactosutens Hansi Kumari, Sanjay Kumar Gupta, Swati Jindal, Parul Katoch and Rup Lai, Int. J. Syst. Evol. Microbiol. 59: 2291. 2009. (PROTOBACTERIA)

Sphingobium quisquiliarum Kiran Bala, Pooja Sharma and Rup Lai, Int. J. Syst. Evol. Microbiol. 59:2009. (PROTOBACTERIA)

Sphingobium ummariense Ajaib Singh and Rup Lai, Int. J. Syst. Evol. Microbiol. 59: 162-166. 2009. (PROTOBACTERIA)

Sphingopyxis ummariensis Pooja Sharma, Mansi Verma, Kiran Bala, Aeshna Nigam and Rup Lai, Int. J. Syst. Evol. Microbiol. (2009); DOI 10.1099/ijs.0.008805-0 (PROTOBACTERIA)

Streptomyces osmaniensis T.V.K.Reddy, Shaik Mahmood, M. Mohammed Idris and Slawomir Ciesielski, Int. J. Syst. Evol. Microbiol. (2009); DOI 10.1099/ijs.0.017749-0. (ACTINOBACTERIA)

Sphingomonas histidinilytica Aeshna Nigam, Simran Jit. and Rup. Lai., Int. J. Syst. Evol. Microbiol. 59: 2009. (PROTOBACTERIA)

Thiohalocapsa marina P. Anil Kumar, T.N.R. Srinivas, V. Thiel, M.Tank, Ch. Sasikala, Ch. V. Ramana and J.F. Imhoff, Int. J. Syst. Evol. Microbiol. 59: 2333-2338. 2009. (PROTOBACTERIA)

Thiomonas bhubaneswarensis Sujogya K. Panda, V. Jyoti, Bhaskar Bhadra, Kinshuk C.

Nayak, Sisinthy Shivaji, Fred A. Rainey and Subrata K. Das, *Int. J. Syst. Evol. Microbiol.* 59: 2009. (PROTOBACTERIA)