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## *Leptotrombidium* (Acari: Trombiculidae) of the World

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## Abstract

The chigger mite genus *Leptotrombidium* Nagayo, Miyagawa, Mitamura and Imamura, 1916 is reviewed using literature data. For 340 larval species brief diagnoses, synonymy, data on type hosts and type localities are provided. The genus is divided into species-groups based on morphological evidence enabling easier establishment of group-membership of unknown specimens in the future. Some species groups are supported by a hierarchical cluster analysis with multiscale bootstrap resampling applied to a matrix including 335 species and geographic morphotypes and 19 standard quantitative characters. Six new species from mammalian hosts are described: *L. aenigmami* **sp. nov.**, *L. abramovi* **sp. nov.**, *L. tikhonovi* **sp. nov.**, *L. bochkovi* **sp. nov.**, *L. laoense* **sp. nov.**, and *L. megaloti* **sp. nov.** from Laos. Seven names created by Vercammen-Grandjean and Langston (1976) for infrasubspecific entities are applied to species with the same descriptions: *Leptotrombidium tenompaki* **sp. nov.**, *L. kinabalui* **sp. nov.**, *L. megabodense* **sp. nov.**, *L. mimului* **sp. nov.**, *L. ului* **sp. nov.**, *L. megalangati* **sp. nov.**, and *L. saigoni* **sp. nov.** A new replacement name is proposed: *L. ushi* **nom. nov.** pro *L. hsui* Wu, Yang and Li, 1999 (praeocc. Yu, Yang and Gong, 1986). Nineteen new synonyms and 7 new combinations are proposed: *Leptotrombidium* (= *Hsuella* Wang, Li and Shi, 1989, **syn. nov.**; = *Leptotrombidium* (*Monosignum*) Wen, 2001, **syn. nov.**), *L. deliense* (Walch, 1922) (= *L. deliense sinense* Wen and Chen, 1984, **syn. nov.**; = *L. deliense microsetosa* Zhao, Tang and Mo, 1986, **syn. nov.**), *L. sialkotense* Vercammen-Grandjean and Langston, 1976 (= *L. jishoum* Wen, Li, Zhang and Liao, 1988, **syn. nov.**), *L. imphalum* Vercammen-Grandjean and Langston, 1976 (= *L. imphalum sabahense* Vercammen-Grandjean and Langston, 1976, **syn. nov.**; = *L. chiangraiensis* Tanskul and Linthicum, 1997, **syn. nov.**), *L. wenense* Wu, Wen, Yang and Wu, 1982 (= *L. kaohuense* Li, Wang and Chen, 1997, **syn. nov.**), *L. longimedian* Brown, 1992 (= *L. mindanensis* Brown, 1992, **syn. nov.**), *L. silvaticum* Hushcha and Schluger, 1967 (= *L. pakistanum* Vercammen-Grandjean and Langston, 1976, **syn. nov.**), *L. cricethrionis* Wen, Sun and Sun, 1984 (= *L. rusticum* Yu, Yang and Gong, 1986, **syn. nov.**), *L. intermedium* (Nagayo, Mitamura and Tamiya, 1920) (= *Trombicula* (*L.*) *daisen* Kumada and Sasa, 1953, **syn. nov.**; = *Trombicula hiranumai* Kanda, 1942, **syn. nov.**), *L. fletcheri* (Womersley and Heaslip, 1943) (= *L. fletcheri francolini* Wen and Xiang, 1984b, **syn. nov.**), *L. apertum* Kudryashova, 1979 (= *L. sorosi* Kharadov, 1995, **syn. nov.**; = *L. tolaicus* Kharadov, 2000, **syn. nov.**), *L. turdicola* Vercammen-Grandjean and Langston, 1976 (= *L. muntiaci* Xiang and Wen, 1984d, **syn. nov.**; = *L. suense* Wen, 1984g, **syn. nov.**), *L. paradix* Vercammen-Grandjean and Langston, 1976 (= *L. montanum* Stekolnikov, 2004, **syn. nov.**), *L. hubeiense* (Wang, Li and Shi, 1989) **comb. nov.** from *Hsuella*, *L. dunqingi* (Liu, Xiang and Ma, 2003) **comb. nov.** from *Hsuella*, *L. nainae* (Kharadov, 1990) **comb. nov.** from *Montivagum*, *L. mongolicum* (Kudryashova, 1988) **comb. nov.** from *Montivagum*, *L. kunitzkyi* (Kudryashova, 1988) **comb. nov.** from *Montivagum*, *L. alaicum* (Kharadov, 1994) **comb. nov.** from *Montivagum*, and *Lorillatum nudisensillum* (Yu, Gong and Tao, 1981) **comb. nov.** from *Leptotrombidium*. A key to *Leptotrombidium* species is provided.

**Key words:** chiggers, systematics, *Leptotrombidium*, review