



## Two new species of *Linotetranus* (Parasitiformes: Tetranychoidae: Linotetranidae) from Iran

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### Abstract

This paper reports the description of two new species belonging to the family Linotetranidae from Iran, *Linotetranus iraniensis* **sp. nov.** and *L. astragalusi* **sp. nov.**, collected in soil associated with gum bushes, *Astragalus gossypinus* Fisch. (Fabaceae). A key to all known species of the world is provided.

**Key words:** mite, phytophagous, Tetranychoidae, gum, Hamedan

### Introduction

Linotetranidae differs from the other four families of the superfamily Tetranychoidae due to the presence of ventral setae *2a* and the absence of eyes (Baker & Pritchard 1953; Beard & Walter 2004). The genus *Linotetranus* was established by Berlese (1910) and it was promoted to the family Linotetranidae by Baker & Pritchard (1953). Currently this family has four genera, namely: *Afrolinotus* Meyer & Ueckermann, *Anoplopalpus* Meyer & Ueckermann, *Austrolinus* Beard & Walter and *Linotetranus* Berlese. *Linotetranus* is the largest genus and based on phylogenetic data is most closely related to *Anoplopalpus* (Beard & Walter 2004). To date 10 species have been recorded from this genus all over the world, namely: *Linotetranus achrous* Baker & Pritchard, 1953; *L. ramosus* Meyer & Ueckermann, 1997; *L. protractulus* Athias-Henriot, 1961; *L. cylindricus* Berlese, 1910; *L. amicus* Meyer & Ueckermann, 1997; *L. edenvillensis* Meyer & Ueckermann, 1997; *L. mirabebensis* Andre, 1996; *L. annae* Meyer & Ueckermann, 1997; *L. nikhani* Bagheri & Haddad, 2008; and *L. anatolicus* Doğan & Dönel, 2010. In this paper two new species of *Linotetranus* are described, representing the second and the third species for Iran, *L. iraniensis* **sp. nov.** and *L. astragalusi* **sp. nov.**, collected from soil under bushes of gum, *Astragalus gossypinus* Fisch. (Fabaceae).

### Material and methods

Mites were mounted directly on slides in Hoyer's medium (Krantz & Walter, 2009). The slides were dried in an oven, sealed with nail polish and examined at 1000X magnification with an Olympus BX51 phase contrast microscope. Drawings were made with a camera lucida. Body width was measured at the broadest point of the idiosoma, just behind coxa III or at the level of setae *c4-c4*. The terminology and setal notations follow that of Lindquist (1985). All measurements are presented in micrometers (µm) as a range followed by the holotype in square brackets. Leg setal formulas are presented as the number of tactile setae followed by the number of sensory setae in parentheses.