



The genus *Proterothrix* Gaud (Astigmata: Proctophyllodidae) of China: a review of research progress*

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The Pterodectinae is one of the two subfamilies (Pterodectinae and proctophyllodinae) in the Proctophyllodidae and its members are characterized by the continuous tips of epigynum with epimerites IIIa and IV forming a keyhole-shaped structure. The feather mite genus *Proterothrix* Gaud, 1968 along with seven more genera, belongs to the “*Proterothrix* generic group”, which is characterized by setae *ps3* anterior to adanal suckers in males.

The diversity of *Proterothrix* in China is poorly known, with only 5 species: *P. megacaula* Mironov *et al.*, 2008, *Proterothrix paradoxornis* Mironov & Proctor, 2009, *P. longicaula* Mironov & Proctor, 2009, *P. sarabushae* Mironov & Proctor, 2009, *P. dinghushani* Constantinescu *et al.*, 2021. Worldwide, this genus includes 34 species; of these 32 were arranged in 3 species groups: *wolffi* (24 species), *schizothyra* (5 species), *megacaula* (3 species).

Three new species of *Proterothrix* were identified from passerines (Aves: Passeriformes) in China: *P. “a”* sp. n. from Chestnut-tailed Minla *Actinodura strigula* (Hodgson, 1837) (Leiothrichidae), *P. “i”* sp. n. from Spotted Laughingthrush *Ianthocincla ocellata* (Vigors, 1831) (Leiothrichidae), *P. “d”* sp. n. from Spectacled Fulvetta *Fulvetta ruficapilla* (Verreaux, J, 1871) (Sylviidae). They belong to the *paradoxornis* species complex of *wolffi* species group in having spindle-shaped setae *e* on tarsi I and whip-like aedeagus in male.

The new species *Proterothrix “a”* sp. n. is most similar to *P. sarabushae* Mironov & Proctor, 2009 by having the following characteristics: in males, the aedeagus extends almost to level of lobar apices. *P. “a”* sp. n. differs from *P. sarabushae* by these features: in males, one pair of adanal shields are present (but 2 pairs are present in *P. sarabushae*), in females, the posterior margin of the anterior hysteronotal shield do not have incisions (but with a pair of incisions extending beyond the level of setae *e2* in *P. sarabushae*).

The new species *Proterothrix “i”* sp. n. is most similar to *P. longicaula* Mironov & Proctor, 2009 by having the following characteristics: in males aedeagus extends beyond apices of opisthosomal lobes. *P. “i”* sp. n. differs from *P. sarabushae* by these features: in males, lateral margin of prodorsal shield has incisions extending to base of setae *se* (but no shallowly concave incisions in *P. sarabushae*).

The new species *Proterothrix “d”* sp. n. is most similar to *P. sarabushae* Mironov & Proctor, 2009 by having the following characteristics: in males, aedeagus extends almost to the level of lobar apices; in females, ventral margin of scapular shields has narrow longitudinal membrane. *P. “d”* sp. n. differs from *P. sarabushae* by these features: in males, adanal shields are absent (but 2 pairs of adanal shields are present in *P. sarabushae*); in females, the posterior margin of the anterior hysteronotal shield does not have incisions (but with a pair of incisions extending beyond the level of setae *e2* in *P. sarabushae*).

Keywords: feather mites, Pterodectinae, *Proterothrix*, China