


A New Species of Pteronyssus from Woodpeckers in Texas
(Acarina: Analgesoidea: Pterolichidae)1

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ABSTRACT

Pteronyssus centurus is described from the golden-fronted woodpecker, Centurus durifrons, and the ladder-backed woodpecker, Dendrocopos scalaris. It is closely related to P. glossifer Gaud but has a differently shaped propodosomal shield in both sexes, and the hysterosomal plate of the female is composed of two sections rather than three as in P. glossifer. The three lots of material on which the description is based were collected in Kleberg and Hidalgo Counties in South Texas, and in Palo Pinto County in the north-central part of the State.

The genus Pteronyssus was erected by Robin (1868) to contain Acarus gracilis Nitzsch. Trouessart and Meguin (1884) considered Pteronyssus intermediate between Pterolichus and Analges. In the family Pterolichidae they recognized three sub-families (Pterolichinae, Proctophyllodinae, and Analgesinae) and included Pteronyssus in the last mentioned. Oudemans (1908) and Vitzthum (1929) referred to Pteronyssus as belonging to Avenzoaridae Oudemans, and allied to such genera as Avenzoaria, Rivolta, Protalges, Ingrassia, and Mesalges which are, by recent classification, a very heterogeneous lot. The genera Ingrassia, Protalges, and Mesalges are considered belonging to the Analgesidae; Rivolta, to Epidermoptidae; and Avenzoaria, to Pterolichidae. Hull (1934) classed Pteronyssus under the group Heteropodina which included such genera as Analges, Protalges, and Megninia. The last mentioned three genera are currently placed in Analgesidae. Therefore, Hull's classification would indicate that Pteronyssus also belonged to the family

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Analgesidae. Radford (1950) placed *Pteronyssus* in the family Pterolichidae along with *Avensoaria*. Baker and Wharton (1952) considered the family Pterolichidae Trouessart a synonym of Dermoglyphidae Megnin and Trouessart, and placed *Pteronyssus* in this family, which also included the genus *Avensoaria*. Dubinin (1953) treated all feather mites as belonging to the superfamily Analgesoidea and placed *Pteronyssus* in the family Analgesidae under a new subfamily, Pteronyssinae. Gaud and Mouchet (1959), in a treatment of the feather mites of the birds of Camerouns, Africa, placed *Pteronyssus* in Pterolichidae. A study of the morphology of *Pteronyssus* tends to relate it to Pterolichidae, especially when studied along with *Avensoaria, Pteronyssoides* and *Pterolichus*. However, it must be pointed out that the subfamily classification proposed by Gaud and Mouchet (1959) cannot be applied to the male of the new species found in Texas. This is due to the structure of the ambulacras, which are utilized to distinguish the two subfamilies Avenzoriniae and Pterolichiniae. In the Avenzoriniae the ambulacras are terminated by a fine point, whereas in the Pterolichiniae they are rounded. *Pteronyssus* has been placed in the subfamily Avenzoriniae but it will be seen that the male specimen (taken from a woodpecker) herein described as new has the ambulacras rounded as in the subfamily Pterolichiniae, while the ambulacras on all legs of the female are pointed.

**Pteronyssus centurus,** new species

*Male.*—Body oval, without a line separating the propodosomal and hysterosomal regions (Fig. 1). Legs arising from margin of body, with reduced propodosomal shield and well-developed hysterosomal shield separated by striated middle section of propodosomal region. Propodosomal region anterior to external scapular setae and internal scapular setae bearing only the reduced propodosomal shield and a pair of pseudostigmatic organs, the latter being well developed and plainly visible in prepared mounts of male and female. Propodosomal shield beset with small raised areas that appear as punctures; shield more heavily sclerotized in midregion, becoming lighter near edges. Small, hairlike, single vertical setae at anterior margin of shield. External scapular setae large, extending beyond body margin; internal scapular setae minute microseta placed adjacent to and posterior to large external scapular setae. These not located on propodosomal shield but found between the lateral propodosomal shields and propodosomal shield within a clearly marked striated area. Lateral propodosomal shields below legs II, extend-
ing to midsection of dorsum. One pair of lateral setae anterior to legs III on margin of body, similar in structure to external scapular setae. Hysterosomal shield beset with 10 microsetae, 8 placed singly near margin of shield, 2 placed internal to single marginal pair that are adjacent to legs IV. Shield with small raised areas similar to those on propodosomal shield.

Apodemes of legs I joined ventrally to form “V”; pair of small setae between apodemes of legs II and fused portion of legs I (Fig. 2). One pair of lateral setae inserted on sclerotized portion of apodemes of legs III. Pair of small setae between apodemes of legs III and IV, anterior to genitalia. Another pair posterior to genitalia, adjacent to apodemes of legs IV. Genitalia between apodemes of legs III and IV, anterior to coxae of legs III and IV. Two pairs of hairlike setae anterior to paired external setae. Posterior end with membranouslike projections arising from dorsum. Each leg bearing truncate earicles with five distinct segments. Legs III hypertrophied. Legs IV smaller than others.

Female.—Larger than male, with reduced propodosomal shield beset with small raised areas. Hysterosomal shield separated into two sclerotized sections at extreme posterior of hysterosomal region. Entire dorsal portion of female devoid of setae except single vertical seta on propodosomal shield and two pairs of scapular setae; these of same type and structure as described for male. Dorsum striated (Fig. 3). Two well-developed lateral shields below legs II.

Apodemes of legs I joined ventrally as described for male, pair of small setae between apodemes of legs II and fusion of apodemes of legs I (Fig. 4). Lateral plates well developed, below coxae of legs II, separating propodosomal region from hysterosomal region, anterior portion heavily sclerotized, beset with pair of lateral setae of same structure and type as found on male. Pair of setae just below this lateral plate and adjacent to genital arch. Genital arch well developed. Two pair of genital setae be-

![Figure 3](image-url)  
**Figure 3**—*Pteronyssus centurus*, n. sp. Dorsal view of female, showing propodosomal and hysterosomal plates.

![Figure 4](image-url)  
**Figure 4**—*Pteronyssus centurus*, n. sp. Ventral view of female.
A Recessive Albinism in the Citrus Red Mite

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ABSTRACT

A strain of citrus red mites, Panonychus citri (McGregor), lacking the normal red color was isolated from albino mites that occasionally appeared in the laboratory colonies. The albinism was due to a single Mendelian recessive. The dominant for red color did not begin to express itself until after the egg had hatched. Albinism did not affect mortality. The sex ratio of progeny from crosses of heterozygous females and albino males fell within the limits found in normal red cultures. Paper chromatograph analysis of the pigments of the mites showed orange and red pigments in the homozygous and heterozygous red but not in the homozygous albino. All three genotypes contained the same green and yellow pigments.

Basic genetic work with the Acarina has been limited. Watson (1956) showed a multiple-gene complex to be responsible for parathion resistance in the two-spotted spider mite, Tetranychus telarius (L.). Taylor and Smith (1956) reported that malathion resistance in T. telarius was due to a single dominant allele. Hussey and Parr (1958) showed that coloration in T. telarius (T. urticae Koch) was under two nonallelic genes, with one producing quantitatively more color than the other. The coloration was derived from four dominant genes which produce a red color and four recessive genes which produce a green color. Intermediate colors ranged

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