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FIRST RECORD OF APOLONIINAE IN CHINA—STRAELENSIA TIANI SP. N.—
WITH A REVISED DIAGNOSIS OF THE GENUS STRAELENSIA
(ACARIFORMES: LEEUWENHOEKIIDAE)

by Ting-huan WEN², Qing-yun TIAN³, Yan GUAN³ and Wan-li WANG⁴

ACARIFORMES

A new species of the genus Straelensia, *S. tiani* sp. n., is described from hares in China. This is the first record of the subfamily Apoloniinae in this country. A revised generic diagnosis of the genus *Straelensia* is also given.

STRAELENSIA

Une espèce nouvelle du genre *Straelensia*, *S. tiani* sp. n., est décrite du lièvre en Chine. C'est la première fois qu'un Acarien de la sous-famille des Apoloniinae a été trouvé en Chine. Une diagnose révisée du genre *Straelensia* est également présentée.

CHINA

Mites of the subfamily Apoloniinae have not previously been known in China (Wen, 1984). A new species of the genus *Straelensia* is described in this paper as the first record from this country. To date four species, including the new species described herewith, of the genus *Straelensia* were described and it becomes necessary to revise the generic diagnosis.

Genus *Straelensia* Vercammen-Grandjean & Kolebinova, 1968


Type species: *Straelensia europaea* Vercammen-Grandjean & Kolebinova, 1968.

Diagnosis: SIF = 4Bs-B/N-3-1000.0000

Apoloniinae of small size. Legs short and slender. IP = 500-700. Peniscutum (PSc) with anteromedian projection (A) and one anteromedian seta (AM = 1). Legs P₁ and P₂ each with 2 tibialae (t₁ = 2, t₂ = 2) in short, bacilliform, located apically on tibiae I (T₁) and II (T₂). Single genuala I (g₁ = 1) short, g₂ = 0, g₃ = 0, and without tibialae III (t₃ = 0) (fg/t₃ = 1000). One microtibiala I (μt₁ = 1), but no microgenualae (μg) and mastisetae on leg III (P₃) (fm = 0000). Eye lenses (Oc) 2/2, separated by epiostral pleats. Coxa II (Cx₂) with 2 coxalae (cx₂ = 2), the external one being shorter. Body setae numerous, including sternal setae (St) and ventral humeral setae (Hv). Gnathocoxa (Gx) with sinuous striations posterolaterally. Galeal seta branched or nude (gl = B/N). Palptarsus provided with 4 branched setae and a subterminala (ft⁵ = 4Bs).

Geographical distribution: Ethiopian and

1. An abstract of this article had been published in the "Proceedings of the Fifth National Congress of Acarology of China", Nov. 8-12, 1991, Shanghai, p. 85 [in Chinese].
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Palaearctic Regions.

Hosts: Carnivora, Lagomorpha.

Included species:

*S. africana* Vercammen-Grandjean, 1971: South Africa (Transvaal), mongoose — *Herpestes sanguineus*;

*S. europaea* Vercammen-Grandjean & Kolebina, 1968: Bulgaria, wolf — *Canis lupus*;

*S. taurica* Hushcha, 1975: Ukraine (Crimea), hare — *Lepus europaeus*;

*S. tiani* Wen, Tian, Guan & Wang, sp. n.: China (Shanxi), hare — *Lepus capensis*.

*Straelensia tiani* Wen, Tian, Guan & Wang, sp. n. (Fig. 1-6)

Type material: Holotype (Ht) and 41 paratypes (Pt) *ex hares Lepus capensis* L. in Taihangshan Mountain area (1,500 m), Shanxi Province, China, Dec. 1984 and 5 May 1988, Q. Tian and colleagues. Holotype and 23 paratypes deposited in the Medical Acarology Laboratory, Shanghai Medical University; 18 other paratypes deposited in the Department of Parasitology, Shanxi Medical College.
Diagnosis: Small size, legs slender and short, gnathosoma (Gn) tiny, peniscutum (PSc) small, AM very short, body setae asymmetrically arranged. This new species is similar to *S. taurica* Hushcha, 1975, from which it can be distinguished by the following characters:

1. Eristal setae more numerous, usually fSt: (2.2). (2.4.2) = 12. St* composed of 2-3 sub-rows, and St* composed of 3-4 sub-rows (vs. fSt: 2. (2.4) = 8));
2. Scutum wider, AW 38, SB 19 (vs. 33 and 13, respectively);
3. Body larger, Id = 530-689 \times 324-516 (vs. 525-564 \times 270-366);
4. IP = 631-693 (vs. 547-564); (5) Cx\(^3\) eccentrically located (vs. close to the proximal and anterior margin of Cx\(^2\));
5. All specialized setae on legs longer;
6. Ventral humeral setae (Hv) more numerous.

Description: SIF=4Bs-BB-3-1000.0000; fp = B.B.B.B.; IP = 665 (631-693); fSP = 7.7.7;
PSc: Sh = −, A = +; Oc = 2/2 (A<P); fcx = 1.2.1;
pc = +; fSt: (2.2). (2.4.2) = 12(11-14); fRT = 1.1.1;
ALs/AM, SB/PLs; fHv: 9/9 (4-11/6-12) = 18
(15-21); (ps + s + pt\(^3\)) = 0; PL > AL > AM; fDS: 2 + (17.9.8). (16.4). (16.8). (12.5). (26) = 123;
pt\(^1\) = N;
fSc: AM = 2AL ( + 2PL); fVS: 66 a 20 = 86; t\(^1\) > t\(^2\);
Vf = −; Sn: Fl; NDV = 12 + 18 + 123 + 86 = 239;
ct = −; Chs = 0; Sg = −, Trc = −;
fBP\(^1\) = 1.1.5.4.8.18; fBP\(^2\) = 1.2.4.4.6.15 (16); fBP\(^3\) = 1.2.3.3.6.12 (14).

Measurements (μm) (n = 20):

<table>
<thead>
<tr>
<th></th>
<th>AW</th>
<th>SW</th>
<th>(PW)</th>
<th>SB</th>
<th>ASB</th>
<th>PSB (AP)</th>
<th>AM</th>
<th>AL</th>
<th>PL</th>
<th>Sn</th>
<th>HS</th>
<th>DS</th>
<th>VS</th>
<th>St(^1)</th>
<th>St(^2)</th>
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<tbody>
<tr>
<td>Ht</td>
<td>38</td>
<td>50</td>
<td>(90)</td>
<td>20</td>
<td>21</td>
<td>23 (32)</td>
<td>13</td>
<td>24</td>
<td>43</td>
<td>30</td>
<td>38</td>
<td>40/28</td>
<td>20/32</td>
<td>20</td>
<td>22</td>
</tr>
<tr>
<td>Pt: m</td>
<td>35</td>
<td>45</td>
<td>(78)</td>
<td>18</td>
<td>20</td>
<td>19 (25)</td>
<td>11</td>
<td>24</td>
<td>43</td>
<td>29</td>
<td>35</td>
<td>33/28</td>
<td>18/27</td>
<td>15</td>
<td>19</td>
</tr>
<tr>
<td>M</td>
<td>43</td>
<td>58</td>
<td>(105)</td>
<td>21</td>
<td>25</td>
<td>25 (35)</td>
<td>16</td>
<td>30</td>
<td>30</td>
<td>36</td>
<td>42</td>
<td>40/38</td>
<td>23/33</td>
<td>22</td>
<td>23</td>
</tr>
<tr>
<td>X</td>
<td>38</td>
<td>54</td>
<td>(95)</td>
<td>19</td>
<td>23</td>
<td>22 (30)</td>
<td>13</td>
<td>28</td>
<td>46</td>
<td>32</td>
<td>38</td>
<td>35/31</td>
<td>21/29</td>
<td>19</td>
<td>22</td>
</tr>
</tbody>
</table>

Id = 530-698 \times 324-516; Cx\(^1\) = 45 \times 33; T\(^1\) = 62 \times 18; P\(^1\) = 245; Oca = 8
Gn = 83 \times 81; Cx\(^2\) = 54 \times 25; T\(^2\) = 48 \times 17; P\(^2\) = 200; Ocp = 10
Chs = 21 (20-23); Cx\(^2\) = 50 \times 26; T\(^3\) = 53 \times 15; P\(^3\) = 220; A = 13 \times 5

FIG. 2-3: *Straelenzia tiani* sp. n.: gnathosoma and scutum. A = anterior projection; Gn = gnathosoma (d = dorsal left, v = ventral right); Oc = eyes; Sc = scutum.
FIG. 4-6: *Straitsenia tiani* sp. n.: setae on legs and scutum. AM = anteriomedian seta; Cx¹-Cx³ = coxae I-III; P¹-P³ = distal segments of legs, showing specialized setae; PL = posterolateral seta; Sn = sensilla.

Colour of larva greyish-yellow when alive, idiosoma elongated, elliptical, with a shallow constriction behind Cx². Epiostrocal pleats fine. Weakly chitinized PSc pentagonal, surrounded by broad pleats, anteromedian projection (A) small (10-16 × 4-9), punctae (pc) extremely sparse, posterior angle covered by the pleats extending its full appearance after body engorged. Bothridium of the sensilla (SB) small. Sensilla (Sn) short and slender with long, fine, branched whorl. Eyes without ocular plates, separated by epiostrocal pleats; lens of anterior eye (Oca) prominent and tomb-shaped, slightly smaller than posterior one (Ocp), which is almost flat. Body setae short with long barbs. HS longest. Dorsal setae arranged asymmetrically, first row subdivided into 3 sub-rows; 2nd to 4th rows each subdivided into 2. Ventral and caudal setae arranged irregularly. 60% of St¹ subdivided into 2 rows (2.2), 35% of the specimens with 2.2.1 or 2.1.2, and 5% with 2.2.2. St² composed of 5-11 setae, usually divided into 3 sub-rows (2.4.2). Ventral humeral setae (Hv) 7-10 unilaterally in the majority of specimens. Chelobase slender with chelostyle (Chs) tiny. Inner lateral surface of palp-genu and palptibia with fine, transverse striae. Gnathocoxa (Gx) with irregularly sinuous striae along posterolateral margin. Coxa II with 2 cx² of unequal length, parallel at the posterolateral angle of the segment, lengths of cx¹ 25-30, cx² 14-17 and 23-28, cx³ 25-27. Uristigma prominent, anteriad to Cx², with a sharp angle extending inwards. Tarsalae I (t¹) and II (t²) long and slender.

Remarks: The geographical distribution of the new species is limited due to the host inhabiting the shrub forests along the lower slopes of Taihangshan Mountain. The mite larvae were collected from the body hairs of the hare, which is presumed to be only host species of the new mite. The parasite has been collected in large numbers on many occasions from the same hare species at same locality. A large number of rats was caught same time as the hares, without larvae of the new species being found on them.

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