Three new species of Nothopodinae (Acari: Eriophyidae) from China
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ABSTRACT
Three new vagrant species of the subfamily Nothopodinae from China are described and illustrated. These species are Kuangella trifoliatae sp. nov., collected from Derris trifoliata Lour. (Leguminosae), Neodisella garcinae sp. nov., collected from Garcinia oblongifolia Champ. ex Benth. (Clusiaceae), and Nonthaburinus roxburghianae sp. nov., found on Engelhardtia roxburghiana Lindl. (Juglandaceae).

http://www.zoobank.org/urn:lsid:zoobank.org:pub:3C92A4AC-8E1F-49CC-9035-B1093D207A99

Introduction
Eriophyoid mites are tiny obligate phytophagous species (Lindquist and Oldfield 1996). Most of them are highly specialized herbivores forming galls or living freely on a single plant species or genus (Oldfield 1996; Skoracka et al. 2010). Derris trifoliata Lour. (Leguminosae) is a poisonous vine, used extensively for insect pests control and distributed in the Asia tropical regions (Witt et al. 1999). Two eriophyoid mites have been found on Derris spp. in China: Abacarus ellipticae Huang, 2001a described from D. ellipticae Benth. and Tetra guangxiensis Li, Wang & Wei, 2009, described from Derris sp. (Huang 2001a; Li et al. 2009). Garcinia (Clusiaceae) is thrives in tropical habitats, including tropical Asia, tropical America, and southern Africa. It comprises about 450 species and is currently gaining much medicinal and culinary importance (Yapwattananphun et al. 2000; Li et al. 2007). Among the Garcinia species, G. oblongifolia Champ. ex Benth. is medium-sized shrub and widely distributed in southern China and northern Vietnam (Shan et al. 2012). The current literature contains records for two eriophyoid species from Garcinia in China: Mediquam sanasaii Huang, 2001 from G. subelliptica Merr., and Phyllocoptura garcinae Wei & Xie, 2009 from G. paucinervis Chun & How (Huang 2001b; Wei et al. 2009). So far, Diptilomiopous engelhardti Xue, Chen & Hong 2013 is the only eriophyoid mite species reported from Engelhardtia roxburghiana Lindl. (Juglandaceae), which is an evergreen to briefly deciduous tree and widely available in China, Vietnam, Thailand, Burma, and India (Yang and Lu 1996; Xue et al. 2013). Its leaves have been traditionally consumed as sweet tea for possible body weight control.

The subfamily Nothopodinae belongs to the family Eriophyidae and is established by Keifer (1956). It can be distinguished from other subfamilies by the tibiae reduced or completely fused with tarsi, and without seta (Amrine et al. 2003). Seventeen genera and 82 species of the subfamily Nothopodinae are found in China (Wei et al. 2009; Hong et al. 2010; Li et al. 2010; Zhang et al. 2011; Wang et al. 2013). This article provides the descriptions of three new Nothopodinae species which were found new to science.

Materials and methods
Eriophyoid mites were found and collected from the undersurfaces of leaves of the plants Derris trifoliata Lour. (Figure 1(a)), Garcinia oblongifolia Champ. ex Benth. (Figure 1(b)), and Engelhardtia roxburghiana Lindl. (Figure 1(c)) with the aid of a 60× hand magnifying glass in Hainan island and stored in a sucrose–ethanol solution (75% ethanol).

In the laboratory, mites were cleared in Nesbitt’s solution at room temperature and mounted in Heinez’s medium on glass microscope slides according to Kuang protocol (Kuang 1986). All specimens were examined with the aid of an Olympus CX41 microscope under phase contrast (Plan achronmic objectives: ×4/0.1, ×10/0.25, ×40/0.65; ×100/1.25 oil immersion; wide field eyepiece 15×). Micrographs were obtained by Nikon DS-R2 microscope. Schematic drawings were based on de Lillo et al. (2010). Measurements and morphological terminology follow that of de Lillo et al. (2010) and measurement units are in micrometres (μm) and are rounded off to the nearest full number. All are lengths if not otherwise specified. The number of measured specimens is given in parentheses at the beginning of each description. The measurement of the holotype is followed by range of the paratypes measurements in parentheses. The count of ventral annuli starts from the first full semi-annulus behind coxisternal plates; the length of each leg is measured from the trochanteral base to the tip of the tarsus, excluding the empo- dium and solenidion (ω).

All type specimens are deposited as slide mounted specimens in the Department of Plant Protection, Guangxi University, Nanning.

Results
Family Eriophyidae Nalepa, 1898
Subfamily Nothopodinae Keifer, 1956
Genus Kuangella Wei, 2002

Kuangella Wei, 2002: 161–167.
Type species: Kuangella rhis Wei & Qin, 2002.

Diagnosis
Prodorsal shield with frontal lobe, scapular tubercles located near lateral margins of shield, scapular setae directed upward laterally; coxae I fused; tibiae completely fused with tarsi, basiventral femoral setae of leg I absent, tarsal empodium entire; dorsum with a furrow.

Notes
This genus is now comprised of three described species all from south China, namely, K. rhis Wei & Qin, 2002, found on Toxicodendron succedaneum (L.) O. Kuntze (Anacardiaceae); K.
theae Wei, Wang & Li, 2009, found on Sageretia thea (Osbeck) Johnst. (Rhamnaceae); K. eurycorymbus Wang, Wei & Yang, 2013 found on Eurycorymbus cavairei (Levl.) Rehd. & Hand. (Sapindaceae). Herein, the fourth species, K. trifoliatae sp. nov. found on Derris trifoliata Lour. (Leguminosae) is described.

**Kuangella trifoliatae sp. nov.** Yang, Tan & Huang (Figure 2)

**Diagnosis**

Prodorsal shield with broad frontal lobe; median line absent, admedian lines complete, and the first submedian lines incomplete outside the scapular tubercles, scapular tubercles located near lateral margins of shield, scapular setae 7–8, directed upward laterally. Coxae with granules, prosternal apodeme absent. Tibiae completely fused with tarsi, basiventral femoral setae of leg 1 absent, empodium 5-rayed, tarsal solenidion knobbed. Dorsum with median furrow, 24 smooth dorsal semiannuli, 53–56 ventral semiannuli with elongated microtubercles; setae h1 absent. Female genitalia coverflap with granules and two lines around the granulated part.

**Description**

**Female (n = 10).** Body fusiform, light yellowish in life, 155 (127–160), 58 (55–62) wide, 38 (38–42) thick. Gnathosoma. Curved obliquely downward, 20 (18–20), pedipalp coxal setae (ep) 3, dorsal pedipalp genual setae (d) absent, subapical pedipalp tarsal setae (v) 2; cheliceral stylets 15 (15–16). **Prodorsal shield.** 42 (40–42) including the frontal lobe, 55 (51–55) wide, frontal lobe broad, 7 (7–9), 12 (12–13) wide; median line absent, admedian lines complete, and the first submedian lines incomplete outside the scapular tubercles; scapular tubercles placed ahead of rear shield margin and near later margin, 50 (45–50) apart, scapular setae (sc) 8 (7–8), directed upward laterally. **Coxisternal plates.** Coxae with granules, prosternal apodeme absent; anterolateral setae on coxisternum I (1b) 4 (3–4), 10 (9–10) apart; proximal setae on coxisternum I (1a) 8 (8–11), 11 (9–11) apart; proximal setae on coxisternum II (2a) 23 (20–23), 25 (22–25) apart. **Legs.** Tibiae fused with tarsi. Leg I 21 (20–21), trochanter 3 (2–3), femur 8 (8–9), basiventral femoral setae (bv) absent; genu 3, antaxial genual setae (l) 25 (22–25); tarsus 7 (6–7), paraxial fastigial tarsal setae (ft) 20 (20–22), antaxial fastigial tarsal setae (ft) 20 (18–20), paraxial unguinal tarsal setae (u) 3 (2–3); tarsal empodium (em), entire, 5 (5–6), 5-rayed, tarsal solenidion (ω) 6 (5–6), knobbed. Leg II 19 (19–20), trochanter 3 (2–3), femur 8 (7–8), basiventral femoral setae (bv) 6 (5–6); genu 3, antaxial genual setae (l) 7 (6–7); tarsus 5 (5–6), paraxial fastigial tarsal setae (ft) 6 (6–7), antaxial fastigial tarsal setae (ft) 20 (18–20), paraxial unguinal tarsal setae (u) 3 (2–3); tarsal empodium (em) entire, 5 (5–6), 5-rayed, tarsal solenidion (ω) 8 (7–8), knobbed. **Opisthosoma.** Dorsum with median furrow, 24 smooth dorsal semiannuli; 55 (53–56) ventral semiannuli, with elongated microtubercles touching rear annular margins; 2 (2–3) semiannuli between coxae and genital coverflap; setae c2 16 (15–16), 45 (41–47) apart, on ventral semiannuli 8 (8–9); setae d 42 (39–50), 30 (28–30) apart, on ventral semiannuli 19 (18–19); setae e 6 (5–6), 13 (13–14) apart, on ventral semiannuli 33 (33–34); setae f 12 (12–13), 10 (9–10) apart, on 6th ventral semiannulus from rear; setae h1 absent, setae h2 45 (42–53). **Female genitalia.** Genitalia coverflap with granules and two lines around the granulated part, 20 (18–20), 25 (20–23) wide, proximal setae on coxisternum III (3a) 8 (6–8), 18 (18–19) apart.

**Male (n = 2).** Similar to the female. Body 117–121, 40 wide. **Gnathosoma** 17, pedipalp coxal setae (ep) 2; cheliceral stylets 14. **Prodorsal shield** 40–42 including the frontal lobe, 39–40 wide, frontal lobe 6–8, 10–12 wide; scapular tubercles 34–35 apart, scapular setae (sc) 6–7. **Coxisternal plates.** Anterolateral setae on coxisternum I (1b) 3–4, 7–8 apart; proximal setae on coxisternum I (1a) 8–10, 9–10 apart; proximal setae on coxisternum II (2a) 18–21, 20–23 apart. **Legs.** Tibiae fused with tarsi. Leg I 20, trochanter 3, femur 8, basiventral femoral setae (bv) absent; genu 3, antaxial genual setae (l) 20–23; tarsus 6, paraxial fastigial tarsal setae (ft) 18–20, antaxial fastigial tarsal setae (ft) 18–19, paraxial unguinal tarsal setae (u) 2; tarsal empodium (em) 5, 5-rayed, tarsal solenidion (ω) 5. Leg II 19, trochanter 3, femur 8, basiventral femoral setae (bv) 6; genu 3, antaxial genual setae (l) 6; tarsus 5, paraxial fastigial tarsal setae (ft) 5, antaxial fastigial tarsal setae (ft) 18–19, paraxial unguinal tarsal setae (u) 2; tarsal empodium (em), 5, 5-rayed, tarsal solenidion (ω) 7. **Opisthosoma.** 24 dorsal semiannuli, 52–54 ventral semiannuli; 2–3 semiannuli between coxae and genital coverflap; setae c2 14–15, 35–36 apart, on ventral semiannulus 8; setae d 40–43, 24–27 apart, on ventral semiannulus 18; setae e 5, 10–12 apart, on ventral semiannulus 32; setae f 11, 8 apart, on 6th ventral semiannulus from rear; setae h1 absent, setae h2 40. **Male genitalia.** 15 wide, proximal setae on coxisternum III (3a) 5–6, 9 apart, with granules below eugenital setae.

**Type host plant**

Derris trifoliata Lour. (Leguminosae).

**Relation to host**

The mites are vagrants on the undersurfaces of leaves, with no visible damage.
**Type locality**
Diaoaluoshan National Forest Park (18°47′46″N, 109°52′27″E), Linshui, Hainan Province, P. R. China, 16 April 2011, coll. Guoquan Wang.

**Type material**
Holotype: female (slide number GXUEENK1-4.1, marked Holotype). Paratypes: 14 females, 2 males (slide number GXUEENK1-4.2–4.17).

**Etymology**
The specific designation trifoliatae is derived from the specific name of the type host plant, *trifoliata*.

**Differential diagnosis**
This new species is similar to *Kuangella theae* Wei, Wang & Li, 2009, but different from the latter by the following characters:

- prodorsal shield without granules and frontal arcs empodium (em) 5-rayed, the lengths of Leg I setae l′ 22–25 in the new species versus prodorsal shield with granules and frontal arcs empodium (em) 6-rayed, setae l′ of Leg I 40 in *K. theae* (Wei et al. 2009).

**Figure 2.** *Kuangella trifoliatae* sp. nov.: (a) dorsal view of female; (b) female coxigenital region; (c) lateral view of anterior body region; (d) lateral view of annuli; (e) lateral view of posterior opisthosoma; (f) leg I; (g) leg II; (h) genital region, male; (i) empodium; (j) female internal genitalia. Scale bar: 50 μm for a; 20 μm for b; 20 μm for c and e; 10 μm for f and g; 10 μm for h; 4 μm for i.

**Key to *Kuangella* species**
1. Female genital cover flap smooth .... *K. rhis* Wei & Qin, 2002
- Female genital cover flap with granules .......................... 2
2. Empodium 6-rayed .......................... *K. theae* Wei, Wang & Li, 2009
- Empodium 5-rayed .................................................. 3
3. Prodorsal shield with median line ......................................
   .......................... *K. eurycorymbus* Wang, Wei & Yang, 2013
- Prodorsal shield without median line ..........................
   .................................................. *K. trifoliatae* sp. nov.
Genus **Neodisella** Li & Wei, 2006

*Neodisella* Li & Wei, 2006: 57–62.

Type species: *Neodisella smilacaceae* Li & Wei, 2006.

**Diagnosis**

Prodorsal shield with frontal lobe, scapular tubercles placed ahead of rear shield margin; setae 1b absent; tibia of legs short and without setae, empodium entire; opisthosomal annuli with low height, central ridge, setae e absent.

**Note**

One species is known in the genus *Neodisella*: *N. smilacaceae* Li & Wei, 2006, found on *Smilax* sp. (Smilacaceae) in south of China. Herein its second species, *N. garciniae* sp. nov. collected from *Garcinia oblongifolia* Champ. ex Benth. (Clusiaceae) is described.

**Neodisella garciniae** sp. **nov.** Yang, Tan & Wang

(Figure 3)

**Diagnosis**

Prodorsal shield with small frontal lobe; median line incomplete, admedian lines complete, two transverse lines connect with median and admedian lines, forming four cells, submedian lines incomplete, diagonal and close to rear shield margin; scapular setae 10–12, directed medially. Coxae with granules, prosternal apodeme present; anterolateral setae on coxisternum I absent. Tibiae completely fused with tarsi, empodium 4-rayed, tarsal solenidion knobbed. Dorsum with median ridge, 37–38 smooth dorsal semiannuli, 52–54 ventral semiannuli with elongated microtubercles; setae h1 absent. Female genitalia coverflap with granules.

**Description**

**Female** (*n* = 11). Body fusiform, white or light yellowish in life, 110 (103–115), 47 (44–47) wide, 30 (29–31) thick. **Gnathosoma.**

**Figure 3.** *Neodisella garciniae* sp. **nov.**: (a) lateral view of anterior body region; (b) lateral view of annuli; (c) lateral view of posterior opisthosoma; (d) dorsal view of female; (e) leg I; (f) leg II; (g) genital region, male; (h) female internal genitalia; (i) male coxigenital region; (j) empodium; (k) tarsal solenidion I; (l) tarsal solenidion II. Scale bar: 10 μm for a and c; 20 μm for b; 20 μm for d; 10 μm for e and f; 5 μm for g; 10 μm for l; 2 μm for k; 1 μm for k and l.
Curved obliquely downward, 20 (19–20), pedipalp coxal setae (ep) 2, dorsal pedipalp genital setae (d) 5 (4–5), subapical pedipalp tarsal setae (v) 2 (1–2); cheliceral stylettes 15 (15–16). **Prodorsal shield.** 26 (26–28) including the frontal lobe, 42 (40–43) wide, frontal lobe relatively small, 4 (4–5), 7 (7–8) wide; median line incomplete, admedian lines complete, two transverse lines connect with median and admedian lines, forming four cells, submedian lines incomplete, diagonal and close to rear shield margin; scapular tubercles placed ahead of rear shield margin, 17 (17–18) apart, scapular setae (sc) 11 (10–12), directed medially.  

**Coxisternal plates.** Coxae with granules, prosternal apodeme present; anterolateral setae on coxisternum I (1b) absent; proximal setae on coxisternum I (1a) 6 (5–6), 9 (9–10) apart; proximal setae on coxisternum II (2a) 15 (15–16), 20 (18–20) apart. **Legs.**  

Leg I 23 (22–24), trochanter 3 (2–3), femur 8 (8–9), basiventral femoral setae (bv) 8 (7–8); genu 4 (4–5), antaxial genital setae (f') 25 (22–25); tibia 2 (1–2); tarsus 6 (5–6), paraxial fastigial tarsal setae (fr') 20 (20–22), antaxial fastigial tarsal setae (ft') 20 (17–20), paraxial unguinal tarsal setae (u') 3 (2–3); tarsal empodium (em) entire, 5 (5–6), 4-rayed, tarsal solenidion (ω) 5 (5–6), knobbed. Leg II 21 (20–21), trochanter 3 (2–3), femur 8 (7–8), basiventral femoral setae (bv) 17 (15–17); genu 4 (3–4), antaxial genital setae (f) 10 (8–10); tibia 2 (1–2); tarsus 5 (4–5), paraxial fastigial tarsal setae (fr) 4 (3–4), antaxial fastigial tarsal setae (ft) 20 (17–20), paraxial unguinal tarsal setae (u') 3 (2–3); tarsal empodium (em) entire, 5 (5–6), 4-rayed, tarsal solenidion (ω) 10 (9–10), knobbed. **Opisthosoma.** Dorsum with median ridge, 38 (37–38) smooth dorsal semimaniuli; 53 (52–54) ventral semimaniuli with elongated microtubercles touching rear annular margins; 2 (2–3) semimaniuli between coxae and genital cover flap; setae c2 21 (16–15), 31 (28–35) apart, on ventral semimaniuli 9 (8–9); setae d 38 (30–38), 25 (20–25) apart, on ventral semimaniuli 21 (19–21); setae e absent; setae f 15 (14–16), 15 (13–15) apart, on 6th ventral semimaniulus from rear; setae h1 absent, setae h2 52 (48–52). **Female genitalia.** Genital cover flap granulate, 15 (15–17), 20 (19–20) wide, proximal setae on coxisternum III (3a) 6 (6–7), 12 (12–13) apart. 

**Male (n = 2).** Similar to the female mites. Body 88–93, 42 wide. **Gnathosoma** 25, pedipalp coxal setae (ep) 2, dorsal pedipalp genital setae (d) 4, subapical pedipalp tarsal setae (v) 2; cheliceral stylettes 13. **Prodorsal shield** 23–25 (including the frontal lobe), 39 wide, frontal lobe 4, 6–7 wide; scapular tubercles 16–17 apart, scapular setae (sc) 10. **Coxisternal plates,** anterolateral setae on coxisternum I (1b) absent; proximal setae on coxisternum I (1a) 5, 8–9 apart; proximal setae on coxisternum II (2a) 13, 18 apart. **Legs.** Leg I 21–22, trochanter 3, femur 7, basiventral femoral setae (bv) 6–8; genu 3–4, antaxial genital setae (f') 23; tibia 2; tarsus 6, paraxial fastigial tarsal setae (fr') 19, antaxial fastigial tarsal setae (ft') 19, paraxial unguinal tarsal setae (u') 3; tarsal empodium (em) 5, 4-rayed, tarsal solenidion (ω) 5. Leg II 19–20, trochanter 2–3, femur 7, basiventral femoral setae (bv) 14; genu 3, antaxial genital setae (f') 10; tibia 1; tarsus 5, paraxial fastigial tarsal setae (fr') 3–4, antaxial fastigial tarsal setae (ft') 17–20, paraxial unguinal tarsal setae (u') 3; tarsal empodium (em), 5, 4-rayed, tarsal solenidion (ω) 10. **Opisthosoma.** 37 dorsal semimaniuli, 52 ventral semimaniuli; 2 semimaniuli between coxae and genital cover flap; setae c2 15, 27–28 apart, on ventral semimaniulus 8; setae d 31, 22 apart, on ventral semimaniulus 19; setae e absent; setae f 14–15, 13 apart, on 6th ventral semimaniulus from rear; setae h1 absent, setae h2 51. **Male genitalia,** 14 wide, proximal setae on coxisternum III (3a) 6–7, 10 apart, with granules below eugenital setae. 

**Type locality** Bawangling Nature Reserve (109°09'39"E, 19°24'36"N), Changjiang Country, Hainan Province, P. R. China, 15 September 2008, coll. Guo-quan Wang. 

**Type material** Holotype: female (slide number GXUEENN2-1.1, marked Holotype). Paratypes: 10 females, 2 males (slide number GXUEENN2-1.2–1.13). 

**Etymology** The specific designation Garciaeae is derived from the generic name of the type host plant, Garciaeae. 

**Differential diagnosis** The new species can be differentiated from Neosissela smilacaceae Li & Wei, 2006 by prodorsal shield pattern with discontinuous submedian lines, smooth dorsal annuli, setae h1 absent, ventral annuli number 53 (52–54), the lengths of setae d 38 (30–38). In N. smilacaceae prodorsal shield with complete submedian lines, dorsal annuli with elongated microtubercles on rear annular margins, setae h1 present, ventral annuli number 43, the lengths of setae d 54 (Li and Wei 2006).  

**Genus Nonthaburinus** Chandrapaty, 1996  

**Nonthaburinus** Chandrapaty, 1996: 71–72.  

**Type species: Nonthaburinus litchi** Chandrapaty, 1996. 

**Diagnosis** Prodorsal shield with frontal lobe, scapular tubercles placed ahead of rear shield margin; anterolateral setae on coxisternum I (1b) absent; tibia of legs completely fused with tarsus, empodium entire; opisthosomal annuli with central longitudinal ridge and lateral projections. 

**Note** Only one species of the genus Nonthaburinus namely N. litchi Chandrapaty, 1996, found on Litchi chinensis Sonn. (Sapindaceae) from Thailand. In the current paper the second species, N. roxburghianae sp. nov. found on Engelhardtia roxburghiana Lindl. (Juglandaceae) in China is described. 

**Nonthaburinus roxburghianae** sp. nov. Yang, Tan & Huang (Figure 4) 

**Diagnosis** Prodorsal shield with broad and semiociular frontal lobe; median lines absent, admedian lines complete, forming a "V" shape in the anterior of shield; scapular setae 10–11, directed upward. Coxae with granules, prosternal apodeme present; anterolateral setae on coxisternum I absent. Tibiae completely fused with tarsi, empodium 7-rayed, tarsal solenidion knobbed. Dorsum with three ridges, median ridge covered with wax, 26–27 smooth dorsal semimaniuli, each semimaniul with acerose spines projecting laterally; 65–67 ventral semimaniuli with filamentous microtubercules; setae h1 present. Female genital cover flap granulate at base. 

**Description**  

**Female (n = 13).** Body fusiform, white in life, covered with wax, 155 (145–161), 49 (45–49) wide, 28 (28–30) thick. **Gnathosoma.** Curved obliquely downward, 16 (15–16), pedipalp coxal setae (ep) 3 (2–3), dorsal pedipalp genital setae (d) 5 (5–6); cheliceral stylettes 12 (12–13). **Prodorsal shield** covered with wax, 45 (45–47) including the frontal lobe, 44 (42–45) wide, frontal lobe broad and semiociular, 7 (5–7), 12 (10–12) wide; median lines absent, admedian lines complete, forming a "V" shape in the anterior of shield; scapular tubercles placed ahead of rear shield margin, 16 (16–18) apart, scapular setae (sc) 11 (10–11), directed upward. **Coxisternal plates.** Coxae with granules, prosternal apodeme
present; anterolateral setae on coxisternum I (1b) absent; proximal setae on coxisternum II (2a) 15 (15–17), 18 (17–19) apart.**

**Legs.** Tibiae fused with tarsi. Leg I 22 (22–23), trochanter 3 (2–3), femur 10 (9–10), basiventral femoral setae (bv) 7 (6–7); genu 3, antaxial genual setae (l') 25 (23–25); tarsus 6 (6–7), paraxial fastigial tarsal setae (ft') 15 (14–15), antaxial fastigial tarsal setae (ft') 14 (14–15), paraxial unguinal tarsal setae (u') 5 (4–5); tarsal empodium (em) entire, 5 (5–6), 7-rayed, tarsal solenidion (ω) 5 (5–6), tapered towards distal end, without knob. Leg II 20 (19–20), trochanter 3 (2–3), femur 9 (8–9), basiventral femoral setae (bv) 18 (16–20); genu 3, antaxial genual setae (l') 7 (6–7); tarsus 6 (5–6), paraxial fastigial tarsal setae (ft') 4 (4–5), antaxial fastigial tarsal setae (ft') 18 (15–18), paraxial unguinal tarsal setae (u') 4 (3–4); tarsal empodium (em) entire, 6 (5–6), 7-rayed, tarsal solenidion (ω) 9 (9–10), tapered towards distal end, without knob.**

**Opisthosoma.** Dorsum with three ridges, median ridge covered with wax, 27 (26–27) smooth dorsal semiannuli, each semiannuli with acerose spines projecting laterally; 65 (65–67) ventral semiannuli, with filamentous microtubercles on rear annular margins; 2 (2–3) semiannuli between coxae and genital coverflap; setae c2 22 (22–23), 32 (32–35) apart, on ventral semiannulus 8 (7–8); setae d 57 (50–57), 19 (17–20) apart, on ventral semiannulus 21 (20–21); setae e 30 (30–37), 15 (15–16) apart, on ventral semiannulus 40 (40–41); setae f 11 (10–12), 12 (11–12) apart, on 6th ventral semiannulus from rear; setae h1 3 (2–3), setae h2 45 (43–50).**

**Female genitalia.** Genital coverflap granulate at base, 15 (14–15), 17 (17–18) wide, proximal setae on coxisternum III (3a) 6 (6–7), 11 (11–13) apart.**

**Male.** Unknown.**

**Type host plant** *Engelhardtia roxburghiana* Lindl. (Juglandaceae).
Relation to host
The mites are vagrants on the undersurfaces of leaves, with no visible damage.

Type locality
Baisha Country (109°14′27″E, 18°59′23″N), Hainan Province, P. R. China, 11 September 2008, coll. Guo-quan Wang.

Type material
Holotype: female (slide number GXUEENN3-1.1, marked Holotype). Paratypes: 12 females (slide number GXUEENN3-1.2–1.13).

Etymology
The specific designation roxburghiana is derived from the specific name of the type host plant, roxburghiana.

Differential diagnosis
This new species is similar to Nanthaburinus litchi Chandrapatya, 1996, but can be differentiated from the latter by genital coverflap granulate at the base, empodium (em) 7-rayed, setae h1 present, ventral annuli number 65 (65–67). In N. litchi genital coverflap with longitudinal striae, tarsal empodium (em) 6-rayed, setae h1 absent, ventral annuli number 49 (Chandrapatya and Boczek 1996).

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