



<http://dx.doi.org/10.11646/zootaxa.3764.2.6>

<http://zoobank.org/urn:lsid:zoobank.org:pub:37615DCE-8422-4C47-BF8D-6A851192BADB>

A new species of the *Yelicones* Cameron (Hymenoptera: Braconidae: Rogadinae) from Thailand

BUNTIKA AREEKUL BUTCHER

Department of Biology, Faculty of Science, Chulalongkorn University, Phayathai road, BKK 10330, THAILAND.

E-mail: buntika.a@chula.ac.th

Abstract

Yelicones samaesanensis Butcher, new species, is described and illustrated based on a female and male specimens collected at light trap in Chonburi province, Thailand. This wasp is the tenth species of *Yelicones* described from the East Palaearctic and Oriental regions. *Y. samaesanensis* appears closest to *Y. contractus* Papp from Vietnam and India. A key is included to differentiate *Y. samaesanensis* from the similar species.

Key words: *Yelicones*, new species, Thailand, Braconidae, Rogadinae

Introduction

The parasitic wasps genus *Yelicones* Cameron are solitary endoparasitoids of lepidopteran larvae, whose remains they mummify before pupating within the host (Quicke & Chishti 1997; Zaldivar-Riverón *et al.* 2009). For more than two decades after its original description by Cameron in 1887, the genus was known only from a handful of specimens from the New World (Quicke & Kruft 1995). However, over the last 25 years a number of new species have been described, extending the known range of *Yelicones* into the Indo-Australian, Afrotropical and Palaearctic regions. The genus is known to be widely distributed throughout the Old and New Worlds (Fischer 1961, 1962 [as *Pectenopius* Fischer]; Togashi 1980; Papp 1985, 1989, 1991, 1992; Belokobylskij 1993a, 1993b; Quicke & Kruft 1995; Quicke *et al.* 1996, 1997, 1998; Quicke & Chishti 1997; Areekul & Quicke 2002; Areekul & Quicke 2004a,b). Recently, 76 new species of *Yelicones* have been described from the New World (Areekul & Quicke 2006) indicating that its true diversity is still largely unknown. Morphological and molecular phylogenies indicate that the Old and New World faunas represent separate clades (Areekul & Quicke 2006; Areekul *et al.* 2005).

In this paper a new species of *Yelicones* is described based on a female and a male specimens from Chonburi, Thailand, the tenth for the East Palaearctic and Oriental regions (Quicke *et al.* 1997). The ninth *Yelicones* species, *Y. siamensis* Areekul & Quicke, 2002, were also collected by light trapping from Chonburi Province. The biology of the new species is unknown. The genus *Yelicones* can be recognized using the key to braconid genera with shortened fore tarsi by van Achterberg's (1995) or the key to Rogadinae genera by Chen & He (1997).

Material and methods

A female and a male specimens were collected by light trapping at Khao Ma Jor, Samaesan, Sattahip, Chonburi, Thailand. The measurements were made with a micrometer grid and terminology follows van Achterberg (1979, 1988). Light micrographs presented were constructed using image stacking with Cell[^]D[®] software.

Diagnosis. *Y. samaesanensis* keys out to the couplet 6 using the key to East Palaearctic and Oriental species of *Yelicones* (Quicke *et al.* 1997). It can be distinguished from *Y. contractus* Papp by the second metasomal tergite completely striate, second suture striate, hind basitarsus unicolorous, without distinct greyish blotch mediobasally and hind wing vein 2SC+R weakly transverse.

Modification to the key to the species of *Yelicones* of the East Palaearctic and Oriental region (Quicke *et al.* 1997) to accommodate the new species.

- 6. Marginal cell of hind wing not strongly expanded at basal quarter, and only slightly narrowing distally; hind wing vein 2-SC+R absent; second metasomal tergite mostly longitudinally striate and with distinct mid-basal, obtuse, triangular area; hind basitarsus without greyish blotch medio-basally 7
- Marginal cell of hind wing strongly expanded basally, almost 2x wider at basal quarter than apically; hind wing vein 2-SC+R strongly transverse; second metasomal tergite at most with basal 0.25 longitudinally striate and at most with trace of mid-basal, obtuse, triangular area; hind basitarsus with distinct greyish blotch mediobasally 7a
- 7a. Antennae with less than 30 flagellomeres; femora with faint brownish suffusion; second metasomal tergite basally with short, fine and longitudinal striate; second suture indistinct; pterostigma opaque yellow, weakly brownish apically
..... *Y. contractus* Papp, 1991
- Antennae with more than 32 flagellomeres; femora ivory, without faint brownish suffusion; second metasomal tergite completely striate, without median carina; second suture distinct, with deep crenulate; pterostigma yellow
..... *Y. samaesanensis* n.sp.

Acknowledgements

I would like to thank Professor Donald L. J. Quicke for his advice and valuable comments on the manuscript. The Animal Systematics Research Unit, Integrative Ecology Lab, Department of Biology, Faculty of Science, Chulalongkorn University for the Cell[^]D[®] imaging facility. The work was funded by the RSPG and RSPG chula. Special thanks go to RSPG Navy for accommodating us during the field trip.

References

- Achterberg, C. van. (1979) A revision of the subfamily Zelinae auct. (Hymenoptera, Braconidae). *Tidjschrift voor Entomologie*, 122, 241–479.
- Achterberg, C. van. (1988) Revision of the subfamily Blacinae Foerster (Hymenoptera, Braconidae). *Zoologische Verhandelingen, Leiden*, 249, 1–324.
- Achterberg, C. van. (1995) Generic revision of the subfamily Betylobraconinae (Hymenoptera: Braconidae) and other groups with modified fore tarsus. *Zoologische Verhandelingen, Leiden*, 298, 1–242.
- Areekul, B. & Quicke, D.L.J. (2002) A new species of *Yelicones* Cameron (Hymenoptera: Braconidae) from Thailand. *Pan-Pacific Entomologist*, 78, 17–22.
- Areekul, B. & Quicke, D.L.J. (2004a) A new species of *Yelicones* (Hymenoptera: Braconidae: Rogadinae) from Afromontane forest in Western Uganda. *Entomologist's Monthly Magazine*, 140, 285–290.
- Areekul, B. & Quicke, D.L.J. (2004b) Two new species of *Pseudoyelicones* (Braconidae: Rogadinae) from Costa Rica. *Journal of Hymenoptera Research*, 13, 1–7.
- Areekul, B. & Quicke, D.L.J. (2006) Systematics of the parasitic wasp genus *Yelicones* Cameron (Hymenoptera: Braconidae: Rogadinae) and revision of the genus from North, Central and South America. *Systematic and Biodiversity*, 4, 255–376. <http://dx.doi.org/10.1017/s1477200005001866>
- Areekul, B., Mori, M., Zaldivar-Riveron, A. & Quicke, D.L.J. (2005) Molecular and morphological phylogeny of the parasitic wasp genus *Yelicones* Cameron (Braconidae: Rogadinae). *European Journal of Entomology*, 102 (2005), 617–624. <http://dx.doi.org/10.14411/eje.2005.087>
- Belokobylskij, S.A. (1993a) New taxonomic data on the braconid fauna (Hymenoptera, Braconidae) of Vietnam. *Russian Entomological Journal*, 2, 37–67.
- Belokobylskij, S.A. (1993b) Contribution to the taxonomy of Braconidae (Hymenoptera) of the Russian Far East. *Russian Entomological Journal*, 2, 87–103.
- Chen, X. & He, J. (1997) Revision of the subfamily Rogadinae (Hymenoptera: Braconidae) from China. *Zoologische Verhandelingen, Leiden*, 308, 1–187.
- Fischer, M. (1961) Zwei neue Opiinen Gattungen (Hym., Braconidae). *Annalen des (K.K.) Naturhistorischen (Hof.) Museum, Wien*, 64, 154–158.

- Fischer, M. (1962) Die Opiinae des Museo Civico di Storia Naturale in Genua (Hymenoptera, Braconidae). *Annali Museo Civico di Storia Naturale Giacomo Doria*, 73, 71–97.
- Papp, J. (1985) Braconidae (Hymenoptera) from Korea, 7. *Acta Zoologica Hungaricae*, 31, 341–365.
- Papp, J. (1989) A contribution to the braconid fauna of Israel. *Israel Journal of Entomology*, 22, 45–59.
- Papp, J. (1991) New braconid wasps (Hymenoptera: Braconidae) in the Hungarian Natural History Museum, 2. *Annales Historica–Naturales Musei Nationalis Hungarici*, 83, 145–167.
- Papp, J. (1992) New braconid wasps (Hymenoptera: Braconidae) in the Hungarian Natural History Museum, 3. *Annales Historica–Naturales Musei Nationalis Hungarici*, 84, 129–160.
- Quicke, D.L.J. & Chishti, M.J.K. (1997) A revision of the *Yelicones* species (Hymenoptera: Braconidae: Rogadinae) from Africa and the Arabian Peninsula, with descriptions of four new species. *African Entomology*, 5, 77–91.
- Quicke, D.L.J. & Kruff, R.A. (1995) Species of *Yelicones* (Hymenoptera: Braconidae: Rogadinae) in North America with descriptions of two new species. *Annals of the Entomological Society of America*, 88, 129–138.
- Quicke, D.L.J. (1996) First record of *Leptorhaconotus* Granger (Hymenoptera: Braconidae) from South Africa, with the description of a remarkable new species and a discussion of the subfamilial placement of the genus. *African Entomology*, 4, 111–116.
- Quicke, D.L.J., van Achterberg, C. & Godfray, H.C.J. (1997) Comparative morphology of the venom gland and reservoir in opiine and alysiine braconid wasps (Insecta, Hymenoptera, Braconidae). *Zoologica Scripta*, 26, 23–50.
<http://dx.doi.org/10.1111/j.1463-6409.1997.tb00407.x>
- Quicke, D.L.J., Austin, A.D. & Chishti, M.J.K. (1998) Revision of *Yelicones* (Hymenoptera: Braconidae: Rogadinae) from the Australasian region. *Invertebrate Taxonomy*, 12, 897–928.
<http://dx.doi.org/10.1071/it97030>
- Quicke, D.L.J. & Chishti, M.J.K. (1997) A revision of the *Yelicones* species (Hymenoptera: Braconidae: Rogadinae) from Africa and the Arabian Peninsula, with descriptions of four new species. *African Entomology*, 5, 77–91.
<http://dx.doi.org/10.1080/00222939700770381>
- Togashi, I. (1980) Discovery of the genus *Yelicones* Cameron (Hymenoptera, Braconidae) from Japan. *Kontyû*, 48, 571–520.
- Zaldivar-Riverón, A., Shaw, M.R., Saez, A.G., Mori, M., Belokobylskij, S.A., Shaw, S.R. & Quicke, D.L.J. (2009) Evolution of the parasitic wasp subfamily Rogadinae (Braconidae): phylogeny and evolution of lepidopteran host ranges and mummy characteristics. *BMC Evolutionary Biology*, 8, 329.
<http://dx.doi.org/10.1186/1471-2148-8-329>