SUBFAMILY : SPATHIINAE
Genus: *Spathius* Nees (1818)

The genus *Spathius* was erected by Nees (1818) with a type species *Cryptus clavatus* Panzer. *Spathius* is a moderate sized genus belonging to the subfamily *Spathiinae* of the family Braconidae. Smith (1859) studied *Stenophasmus ruficeps*; Foerster (1862) studied *Euspathius* and Cameron (1905) studied *Rhacosphathius striolatus* under the genus *Spathius*.

Nixon (1943 a) and Mathews (1970) revised *Spathius*, while taxonomy of the genus has been attempted by Shenefelt and Marsh (1976).

Shenefelt and Marsh (1976) recorded 291 species from the world under the genus *Spathius*, of which 204 species are from Indo-Australian and Pacific regions, amongst these 19 species are known from India. *Spathius* has been divided into 55 species groups by Nixon (1943 a) and also provided a key to *Vulnificus* group of females of *Spathius* and included *S. critolaus* Nixon (1939) (with vestigeal wings), *S. vulnificus* Wilkinson (1931) and *S. critolaus* (with wings fully developed) under this group.

The earlier works on *Spathius* in Indo-Australian region are by Szepligeti (1905, 1908), Cameron (1908, 1910), Enderlein (1912), Wilkinson (1931), Nixon (1939, 1943), Krishna Ayyar and Narayanswami (1940).
Recently Kurhade and Nikam (1992) described a new taxa *Spathius deccanensis* on the material collected from India: Maharashtra: Ahmednagar and also amended the key to the species of *Vulnificus* group of females of *Spathius*.

In the present work, a new species *Spathius shivnerensis* is described on the females collected from India: Western Maharashtra: Pune: Junnar, and for this the key to the species of *Vulnificus* group of females of *Spathius* by Nixon (1943) modified by Kurhade and Nikam (1992) has been followed, wherein the new taxa has been subjected.
A key to the species of *Vulnificus* group, Females of *Spathius* by Nixon (1943), modified by Kurhade and Nikam (1992).

1. Wings vestigeal; yellowish, brown species with the abdomen except tergites 2 and 3 pale in part, blackish; tergite 2 and 3 except for the narrow apical margin, finely longitudinally striate. .... *critolaus* Nixon (1939)

- Wings fully developed. .... 2

2 Tergites 2 and 3 dull, extremely, closely reticulate, appearing finely rugulose; almost shagreened species with tergites 2 and 3 having the basal half entirely yellow and yellowish spot on each side. .... *sul* Nixon (1943)

- Tergites 2 and 3 differently sculptured. .... 3

3. Tergites 2 and 3 smooth, without a yellowish semicircular area at the base. .... 5

- Tergites 2 and 3 with yellowish area at the base. .... 4
4. Tergites 2 and 3 with yellowish semicircular area at the base; finely, obliquely aciculate; beyond this area almost smooth; 2nd abscissa of the radius of fore wing only slightly more than half the length of the 3rd; ovipositor longer. ... ... *vulnificus* Wilkinson (1931)

- Tergites 2 and 3 yellowish at base but without this colour being restricted to a semicircular area; finely longitudinally striated; 2nd abscissa of radius about 2/3 of the length of the third; ovipositor shorter. .... ... *critolaus* Nixon (1939)

5. Vertex differently sculptured. ... 6

6. Vertex smooth; antenna 2 + 47 segmented; mesoscutum rugoso-reticulate. ... ... *deccanensis* Kurhade (1992)

- Vertex striated; mesopleurum smooth; mesopleural fovea distinct; propodeum areolated. ... 7

7. Mesoscutum granulated; antenna 2+37 segmented; 1st abdominal segment rugoso-reticulate. ... *shivnerensis*, sp. nov.
Mesoscutum distinctly carinated; antenna $2+47$ segmented; first abdominal segment rugose. ... \textit{nikamensis}

Phadake (1997)
Spathius shivnerensis, sp. nov.
(Fig. 21 a to c)

Female 3.46 mm (Fig. 21a). Head 0.8 times as long as wide, rectangular; vertex shiny, transversely striated, shallowly punctate, sparsely pubescent; interocellar distance 0.2 times as long as ocellocular distance; ocelli in an equidistance triangle, small, colourless; frons transversely, obliquely striate; face 0.5 times as long as broad, transversely striate, punctate, moderately elongately pubescent; clypeus narrow, 0.3 times as long as broad; malar space as long as the basal width of the mandible, shiny, smooth, weakly punctate, pubescent; mandible gradually tapering towards the apex, bidentate, overlapping, striate, pubescent; temple broad, 1.5 x as broad as width of eye, shiny, weakly punctate, pubescent; maxillary palp five segmented, pubescent; antenna 2 + 37 segmented; scape 1.8 x as long as wide, shorter than the first flagellar segment; pedicel as long as wide; postpedicel cuboidal, as long as broad; first penultimate segment 5 x as long as wide; second penultimate segment 4 x as long as wide; middle segment 2.5 x as long as wide; terminal segment 2.5 x as long as wide, concial.

Thorax 1.7 x as long as wide; pronotum with median furrow, strongly crenulated, carinated; pronotal collar hexagonally rugoso-reticulate; posterior pronotal corner strigose, sparsely
Fig. 21

*Spathius shivnerensis*, sp. nov. ♀

a) Lateral view, entire  
b) Head, viewed from front  
c) Propodeum and first abdominal tergite
pubescent; mesoscutum granulated, punctate, sparsely pubescent; notauli distinct; prescutellar depression with five longitudinal carinae; scutellum granulate; anterior corner of mesopleurum rugoso-reticulate, transversely carinated; mesopleural fovea distinct; propodeum (Fig. 21c) areolated; apical areola transversely carinated; apical transverse carina distinct; basal areola smooth; basal longitudinal carina short; first and second pleural area transversely carinated; lateral longitudinal carina distinct; propodeal spiracle small, rounded.

**Forewing** 4.7 x as long as wide; stigma 5.3 x as long as wide; costa 2.8 x as long as stigma; first abscissa of radius 0.8 times as long as the width of stigma; second abscissa of the radius 4.6 x as long as first abscissa of radius; third abscissa of radius 9 x as long as first abscissa of radius, 2 x as long as second abscissa; first intercubitus 2 x as long as first recurrent vein, basal 0.5 times as long as the width of stigma; submedius as long as medius; submedius 1.5 x as long as stigma; first intercubitus parallel to the first recurrent and basal.

**Hind wing** 5 x as long as wide; mediella 3.7 x as long as basella; cubitella as long as mediella; nervellus reclivous, basad, 1.2 x as long as stigma; postnervellus as long as nervellus, interstitial.

**Hind coxa** 1.6 x as long as broad, longitudinally carinated, transversely sparsely striate, sparsely pubescent;
trochanter 2.5 x as long as wide; trochantellus 1.7 x as long as wide; femur 3.5 x as long as wide basally, sparsely pubescent; tibia 1.5 x as long as femur, slender; tibial spur 0.4 times as long as basitarsus; tarsus five segmented; telotarsus 2 x as long as broad basally; claws simple.

*Abdomen* 3 x as long as broad, petiolate, spindle shaped; first tergite strongly petiolate, 1.6 x as long as wide, with two dorsolateral longitudinal carinae extending upto 3/4 apical region, longitudinally striate, elongately pubescent; second tergite 0.8 times as long as wide basally, smooth, polished, pubescent; third tergite 0.4 times as long as wide medially, smooth, polished, basally sparsely equidistantly elongately pubescent; fourth tergite 0.2 times as long as wide apically, shiny, smooth, basally sparsely, equidistantly elongately pubescent; remaining tergites smooth, shiny, pubescent; ovipositor long, pointed, as long as ovipositor sheath; ovipositor sheath longer than abdomen, pubescent.

Body brownish-black; head, antenna, tibia, tarsus brownish-yellow; tips of mandible, anterior half of propodeum, abdominal tergite from 2nd to last black; first abdominal tergites, ovipositor, mesopleurum dark reddish-brown.

*Male*: Unknown.

*Holotype*: ♀ : India : Western Maharashtra : Pune : Junnar ; 5.VII.1999; A.A. Shaikh Coll. Antenna, wings, and legs mounted on slides and labelled as above.

*Paratypes*: 6 ♀ ♀ , data same as holotype.
DISCUSSION

In accordance to the key to the species of Vulinificus group (Nixon, 1943) of the genus *Spathius* modified by Kurhade and Nikam (1992), the new species, *Spathius shivenerensis* runs close to the *Spathius deccanensis* Kurhade and Nikam (1992) and resembles with the same in having: i) Frons transversely striated, ii) malar space smooth, iii) notaulli distinct, iv) scape shorter than first flagellar segment, v) second and third abdominal tergites smooth, polished, vi) ovipositor longer than the abdomen. However, the new taxa differs from the same having: i) vertex transversely striated, ii) antenna 2 + 37 segmented iii) mesoscutum granulate, iv) mesopleurum rugoso-reticulate, v) first abdominal tergite with two longitudinal carinae, longitudinally striate, vi) propodeum with short basal longitudinal carina, vii) first intercubitus parallel to the first recurrent and basal and viii) body dark brownish-black.