

## **Trechinae from the Far East with description of new species collected by E. Suenson.**

By

**E. Suenson.**

(With plate 1-2).

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While collecting groundbeetles in the Far East during my 30 years stay in Shanghai, I did not often find any Trechinae there, but after working over my material by using Professor R. Jeannel's splendid work on this group, I found that I had some interesting things in the lot.

I therefore made a trip to Paris and it was certainly a great pleasure for me to meet Professor Jeannel and to see the fine oriental specimens in the collection there without which I should not have been able to write these lines and I therefore wish to express my thankfulness to him for his valuable help.

### **Perileptus.**

Of this genus I found only one species, *japonicus* Bates. A single specimen the 13. June 1926 in the very northernmost part of the main island Honshu, often wrongly called Nippon which means Japan, on the low land with paddyfields that extends from Aomori on the coast, southwards to the mountains. I found the specimen in the wet sand near the waters edge of a small stream with sand and pebbles not far from the mountains.

Near the town Oita on the northeast coast of Kiushu I found the species in great numbers for instance the 6. October 1935 in the moist sand around small pools left over from high water in the river-bed near the town.

**Trechus. Subgenus Epaphius.**

Of this subgenus I did find several species.

**Trechus (Epaphius) ehippiatus** Bates.

This species is found on moist ground sandy as well as muddy both in woods and other places. I found many specimens washed up by high water along rivers as well as the sea. It is most common from August to October but can also be found in May. I found all my Japanese specimens on the island Kiushu, mainly in the coastal zone of the northwest and northeast, but I also found it on the Shimabara peninsula, near Nagasaki at low level, and in the wooded mountains around the village Unzen at 2000 feet altitude. I also have a typical specimen from a mulberry plantation taken 28. May 1934 near Wusih, Kiangsu province, China, and of the var. *aegrotus* Bates in my garden in Shanghai 11. May 1924 and another near Soochow, Kiangsu province, 29. April 1928.

**Trechus (Epaphius) punctatostriatus** Putzeys.

This, apparently rare species, I have only taken once and that was on the 22. June 1923 at the Pei ling (north tomb) north of Mukden, Manchuria. After heavy rain some pools of water had been formed. There was a scanty growth of grass and mole-cricket had been digging in the wet clayey soil and loosened it, and this was where I found my three specimens.

**Trechus (Epaphius) chinensis** Jeannel.

I got 13 specimens the 21. October 1928 under rubbish on a low stretch of land with reeds along the Wang po river above Shanghai.

**Trechus (Epaphius) unzenensis** Jeannel.

This species I often sifted from dead leaves along small brooks in the woods around the village Unzen on the Shimabara peninsula about 2000 feet above sea-level during the month August to September.

**Glabrotrechus n. gen. fujii n. sp.**

Characteristic among the Trechinae of the Far East by having the elytral striae almost effaced and by having setigerous punctures on the third and fifth striae. The scutellar stria is short. First and second striae are fairly well marked especially the first with discernible traces of punctures. Third stria almost obliterate in the middle, fourth and fifth marked only by a row of vague punctures. Just before the apex first, third, and fifth striae are marked by a row of four to five punctures. The setigerous punctures on the elytra are well marked. There is a puncture just behind the base in front of second stria. The first stria curves outwards here and joins the straight second stria just behind the mentioned puncture. There are four setigerous punctures on the third stria, the first 0.3 mm., the second 0.8 mm., the third 1.3 mm., the fourth 1.8 mm. from the elytral base. The total length of the elytra is 2.4 mm. On the fifth stria there are two setigerous punctures the first of which a little behind, almost level with first puncture of the third stria, the second about two thirds of the distance between the second and third puncture of the third stria, behind the first mentioned of these. The base of the elytra is curved slightly backwards in the middle until it meets the outwards curved front part of the elytra somewhat inside of the hind angles of the thorax, here forming a vague obtuse angle. Just outside of this angle there is a marginal setigerous puncture and just after the evenly curved front part has joined the lateral margin there are four well marked setigerous punctures set closely together. Level with the middle of the space between third and fourth puncture of third stria the first of a row of five setigerous punctures is found, being aequidistantly distributed from here to the elytral apex following the inner line of the here much broader margin of the elytra.

Otherwise it is a light chestnut-coloured fairly smooth and shining insect 4.3 mm. long, 1.7 mm. wide with 2.2 mm. long antennae and fairly oval and convex.

The head is fairly flat with well marked evenly curved frontal grooves and sharp and pointed mandibles. The eyes are small and flat their diameter somewhat less than the temples. The first supraorbital puncture is just above the center of the eye and inside the straight ridge that runs from the base of the antennae to the inner edge of the eye. The other supraorbital puncture is situated near the hind part of the frontal groove in a direction parallel to the abovementioned ridge.

The thorax is 1.15 mm. wide and 0.95 mm. long, broadest at the first third. The edge of the lateral sides is prominent, the front part well rounded but the hind part almost straight down to the somewhat prominent hind angles. A little inside of these, the edge of the base is drawn a little forwards and inside of this part there is a somewhat lower area along the front of which there is a row of shallow foveae forming an arch curving forwards. There is a similar area along the edge of the apex pointing backwards. The median line on the more elevated part of the thorax stops before the rows of foveae on the depressed parts.

The type is from Shoji at the foot of Mount Fuji about 3000 feet above sea-level, found among dead leaves on a moist well wooded slope near the little inn on the 18. August 1926. I found another specimen, cotype, on the 10. August same year in a big heap of dead leaves along the road that led from the inn through the village over a low ridge on the other side of which I found the heap of dead leaves in the woods.

The cotype is somewhat smaller than the type and the sculpture on the elytra even more vague, but otherwise the description fits well, with the exception that

the five punctures along the hind part of the edge of the wing-cases are very vague and partly missing.

I have named this species in honour of Japans most sacred mountain in the neighbourhood of which I have spent so many happy days collecting, and also admiring its beautiful outline.

This new genus seems to be closely related to *Epa-phius* to which mainly the position of the last puncture on the third stria and the form of the thorax points. The presence of setigerous punctures on the fifth elytral stria indicates relationship to *Trechiamia*.

### **Trechiamia.**

Of this group which Professor Jeannel first described as a subgenus, but year 1953 gave the rank of a genus, I have found only two specimens in Japan.

#### **1. *Trechiamia oreoides* n. sp.**

I found this specimen near Sukayu about  $17\frac{1}{2}$  miles south of Aomori on the north coast of Honshu opposite Hakodate. The specimen was taken on the mountain Hakoda san about 4500 feet above sea-level under old logs in wood of firtrees.

The specimen is 6 mm. long, 2.2 mm. wide with antennae 2.2 mm. long of shining dark brown colour, legs, antennae and mouthparts paler. A part of the suture is also paler, which however may be an abnormality of this specimen and not the rule.

The head is fairly long and narrow. The frontal grooves are deep and fairly straight on the front but vague behind the eyes. The small but well developed eyes are smaller than the temples but nearly as long as the distance from their front edge to the root of the antennae.

The thorax is cordiform 1.4 mm. wide and 1.2 mm. long, and well curved on the sides until shortly before

the pointed hind angles formed by the short straight hind part of the sides and the almost straight base.

The elytra are fairly oblong 3.4 mm. long. From the base they go in a nearly straight slanting line out to the shoulders from where they are only slightly curved down to the evenly rounded tip. The three punctures on the third stria are situated at a distance of 0.4 mm., 1.3 mm. and 2.4 mm. from the base, and the two on the fifth stria 0.6 mm. and 1.9 mm. from the base.

Year 1954 Professor Jeannel points out that the specimen pictured by him 1927 as *T. Oreas* Bates, does not belong to this species but is another species which he describes under the name *T. angulicollis*.

*T. oreoides* differs from *angulicollis* by having the base of the thorax straight with the hind angles straight outwards to the sides and not prolonged backwards behind the base of the thorax as in *angulicollis* Jeannel. My specimen is very similar to *T. Oreas* Bates from Iwaki san, a locality east of, and not far from, Hakoda san where I took my *T. oreoides* which is darker and altogether more depressed with the elytral striae perhaps a bit less impressed. The shape of the thorax is however different. Besides being more depressed, darker and shining, not reddish brown as in *T. Oreas*, the sides are more evenly rounded down to the more pointed hind angles. The reflexed margin is much broader behind, whereas in *T. Oreas* it is altogether narrower and a little narrower behind. *T. oreoides* has the basal impression divided into a big outer one and a small inner one separated from each other by a small ridge, whereas *T. Oreas* has them confluent into one transverse impression on each side.

## 2. *Trechiana ovalipennis* n. sp.

This specimen was taken on the slope of Hodake the 20. July 1939 near the snow-drifts at approximately 7500

feet altitude. Hodake is one of the snow-clad mountains surrounding the tiny village Kamikochi in the Japanese Alps 26 km. west of the town Matsumoto in the valley that runs from the south northwards across Honshu to Niigata on the westcoast. Kamikochi is situated in a mountain-valley 5000 feet above sea-level in fine woods of birch, some beech and many other trees all in profusion, including coniferous. *T. ovalipennis* is a very big species of a shining dark brown colour, legs and antennae paler. It is 7.1 mm. long, 2.7 mm. wide with antennae 4.3 mm. The depressed wingcases are regularly oval.

The frontal grooves are fairly parallel between the eyes curving outwards in a regular circle behind them. The eyes are well developed, their diameter a little shorter than the temples. The mandibles are long and pointed.

The thorax is very much cordiform. From the front edge, which is curved slightly backwards, the side edge is first curved broadly outwards and then at the front third continued in an almost straight line slanting inwards towards the much narrower hind part which is sinuated shortly before reaching the outwards pointing back angles of the almost straight base of the thorax. The greatest width of the thorax is 1.5 mm., the narrowest part in front of the hind angles 0.8 mm. and the length 1.5 mm.

The sculpture of the elytra is not very distinctly marked. The striae although clearly marked are not sharply impressed and only vaguely punctured. The scutellar stria is absent and only vaguely indicated by a shallow ridge between the first stria and the scutellum. The first and second stria join each other in front and are here more deeply impressed. The third stria has 3 setigerous punctures, the first at 0.5 mm., the second at 2.8 mm., and the third 3.5 mm. from the base, the total length of the elytra being 4.1 mm. The fifth stria has two punctures, the first at 1.2 mm. and the second at

1.8 mm. from the base. The punctures are not strongly impressed and seem to be somewhat irregular regarding position.

This species reminds somewhat of *T. janoanus* Jeanne from Corea, but besides being bigger it is darker coloured and much more depressed than *T. janoanus*. The thorax as described above is much broader in front and much narrower behind, and the elytral striae better marked the sixth and seventh being visible whereas the fifth is hardly discernible in *janoanus*.

**Tienmutrechus n. gen. dispersipunctis n. sp.**

This big brown fairly oval species differs from all other *Trechinae* by the sculpture on its elytra. These do not have the regular setigerous punctures on the third stria but have less prominent setigerous punctures spread all over the elytra especially on and near the third and fifth stria. All the striae are strongly punctured. The scutellar stria starts in a deep puncture and curves towards the suture. The first stria is straight and well marked and follows the suture, gradually drawing nearer to it towards the tip. The second stria is also fairly straight especially so on the type specimen, less so on the cotypes. It draws nearer to the first stria hindwards but near the tip it curves outwards enclosing a broader area between first and second stria. Third stria is quite irregular with setigerous punctures on it as well as on both adjoining intervals. Furthermore the stria is dissolved in smaller rows of punctures similar to those of the other striae. Fourth stria is again fairly straight and well marked. It joins the third before reaching the tip and ends there. The fifth is more dissolved and interrupted than the third and with many setigerous punctures spread all over. Together with the similarly dissolved sixth stria it forms an area covered with small rows of punctures and setigerous punctures spread over it without any order, en-



closed between the fourth and seventh stria and reaching down to the deeply impressed recurrent stria at the tip. The seventh stria is quite regular, perhaps a bit less strongly punctured than the inner ones. An eighth stria starts behind a few punctures above the big setigerous punctures in the margin behind the shoulders. This at first runs fairly parallel to the edge then nears it a little for again to curve inwards away from the edge. There is also a line of small punctures in the margin along the edge of the elytra.

The type is 5.9 mm. long and 2.3 mm. wide with antennae 3.2 mm.

The eyes are small but well developed almost as long as the temples. There is a setigerous puncture inside the center of the eye and an other straight behind it almost touching the frontal groove. These are fairly well marked, not too regularly curved being nearest each other before the eyes. The head is finely reticulated especially behind. The thorax is almost smooth 1.6 mm. wide and 1.3 mm. long. The edge is prominent with a broad margin inside it. In the front part of this there are three aequidistant setigerous punctures. From the last of these the edge runs fairly straight down to the small rectangular hind angles. There is a setigerous puncture on these very near their outer edge. The base is almost straight. There is a deep groove inside the angle and a well marked fovea each side near the middle on the elevated part where the centerline reaches the back edge of the thorax but it does not reach the front edge.

I found this species the 23. June 1937 on the mountain Si (west) Tien mu shan in Chekiang province. This mountain is 1500 m. high with fine woods of big trees below and up the sides to a terrace where there is a small temple at 1050 m. altitude from where the rounded upper part is covered with dense brushwood up to

the top. In the woods behind this temple there was a tiny brook where I sifted four specimens including the type from small heaps of dead leaves and found another under a big stone on wet clayey soil in the brook. Unfortunately only the type is mature. The four cotypes being immature are pale testaceous. Their length varies from 5.7 to 6.2 mm. but otherwise they fit fairly well with the type. The type has a well marked fovea right in the middle of the vertex but this is not the case with all the cotypes. There is also a slight irregularity regarding the three setae in the front part of the reflexed margin of the thorax.

***Trechoblemus lindrothi* n. sp.**

This species resembles *T. micros* Herbst but it is somewhat bigger, the type being 4.4 mm. long, 1.5 mm. wide and antennae 2.6 mm. It is however best distinguished from *T. micros* by the form of its thorax the sides of which run from the broad front in an almost straight line backwards to the slightly obtuse hind angles, in front of which they are not sinuated but only bent a little outwards and becoming more straight before reaching the hind edge. *T. micros* has the sides rounded all the way down towards the hind angles and become sinuated in front of them.

The type was taken flying towards evening on a warm day in Shanghai on the 24. October 1936. There are four cotypes all taken in Shanghai where it seems to be rare, and I have never found it elsewhere in the Far East. I took two specimens on 3. June 1918, one the 27. July 1929, and one the 1. September 1936, these two last named flying to light. One specimen has a vague dark blotch on the elytra.

It is a pleasure to me to name this species after my dear friend of many years, Professor C. H. Lindroth of the University of Lund, Sweden.

**Trechoblemus valentinei n. sp.**

This is a comparatively big species 4.6 to 5 mm. long, ferruginous with a more or less pronounced dark oblong blotch on each elytra the center of which is about the second setigerous puncture. The head is usually darker around the eyes. *T. valentinei* differs from *T. lindrothi* by being bigger and by having the dark blotch on the elytra. The shape of the thorax is also slightly different from that of *lindrothi* as the sides are not quite so straight. From the Japanese *T. postilenatus* Bates it can easily be told by having the sides of the thorax not sinuated whereas *postilenatus* has them sinuated.

I obtained seven specimens, type and cotypes of this fine species in the hills south of Chinkiang, Kiangsu province the 26. May 1924. They came flying to light near a small temple where there at that time was a grove of trees in the hills which otherwise were covered with brushwood.

The type is 5 mm. long, 1.65 mm. wide, with antennae 3 mm. long. The thorax is 1.15 mm. wide and 0.98 mm. long.

It is with great pleasure that I name this fine species after my dear friend, Dr. J. M. Valentine who has helped me so much and given me so much valuable advice during my collecting trips in the United States.

**Lasiotrechus discus Fabricius.**

Of this species I found a single specimen the 10. July 1923 under a log washed up by high water on the sandy shores of the Hun ho river near Mukden, Manchuria. This example does not differ from the European form except by, that the dark blotch on the elytra shows a tendency to extend forwards along the lateral margin. On my Danish specimens they curve backwards before reaching the margin. Otherwise it is a small specimen 4.5 mm. long.

**Subspecies alexandrovi** Lutshnik.

Of this form I have taken 41 specimens at Kamikochi at various times singly in the woods near the river and at one time a number of them in a sandpit in the woods. They were collected between the 15. July and the 15. September during the years 1934 to 1939 in the mountain valley 5000 feet above sea-level.

The dark blotch in the wingcases varies in size. The tip of the elytra is red in all cases. Towards the front part the dark colour can extend forwards on both sides to the shoulders and less so along the suture leaving the outer edge of the elytra red. In such specimens the red colour around the scutellum is reduced to two oval parts joining each other in front. Most often the red colour on the front part of the elytra is more extended, the dark blotch, which is always much bigger than in *L. discus*, showing a tendency to extend a little forwards along the suture and sometimes towards the shoulders. Some individuals have the front part red in its total width. The thorax is usually dark but can also in a few cases be red. The length is 4.6 to 5.7 mm.

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On a collecting expedition to the Wu tai shan mountains in the northern part of Shansi province, China, I found two species belonging to the big group of *Trechus* s. str. Professor Jeannel was kind enough to undertake the description of these two species, see the following paper.

On the Tung tai (east top) which is 8500 feet above sea-level I found several of *Trechus tuxeni* Jeannel including the type and a single example of *Trechus suen-soni* Jeannel a little down the slope where some water trickled out. The mountain top was covered with low grass and flowers. After having collected there the 24. and 25. August 1929 I moved to the 9500 feet high top Pei tai (north top) where I found a number of both spe-

cies all over the more extended flat top of the mauntain which was also covered with low grass. The place was more rocky and water was standing in low places and holes in the rocky soil. At such places I found both species although *T. tuxeni* seemed to prefer these places as well us wet places down the slope, whereas *T. suenisoni* was more plentiful around a little pond with clear water near the temple on the top. I collected on the Pei tai the 26. and 27. August 1929. The type of *T. suenisoni* was taken the 26. August between 9200 and 9500 feet above sea-level. The type of *T. tuxeni* was taken the 24. August.

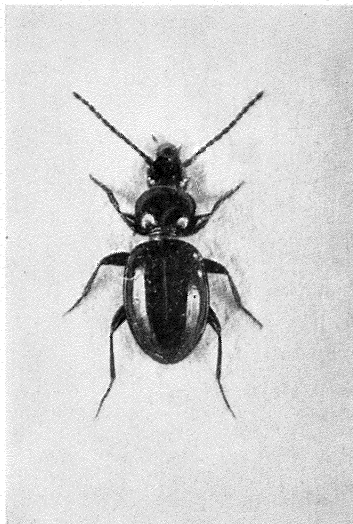
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The abovementioned specimens are all in collection E. Suenson in the Zoological Museum of Copenhagen except one *T. (Epaphius) punctatostratus*, one cotype of *Tienmutrechus dispersipunctis*, one cotype *Trechoblemus lindrothi*, one cotype *Trechoblemus valentinei*, four *Lasio-trechus discus alexandrovi* and one cotype of each of the two *Trechus* from Wu tai shan, which are all in the Musée National d'Histoire Naturelle, Paris.

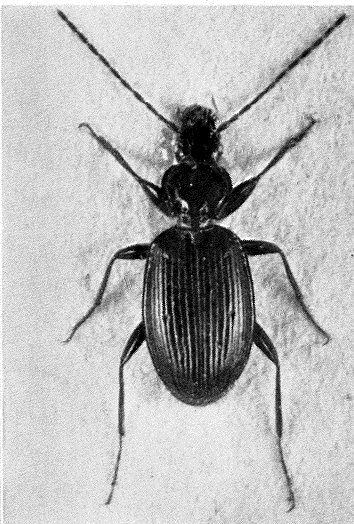
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The photographs illustrating the eight types described here by Professor Jeannel and myself and a cotype of *T. suenisoni* were illuminated with electronic light from both sides. As a result of this those areas where the rays were reflected show more or less white on the uniformly brown coloured specimens especially on the more polished and convex ones.

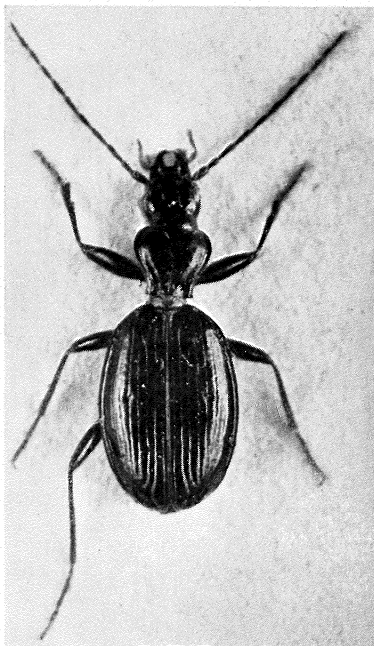
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*Glabrotrechus fujii* n.sp. Suenson



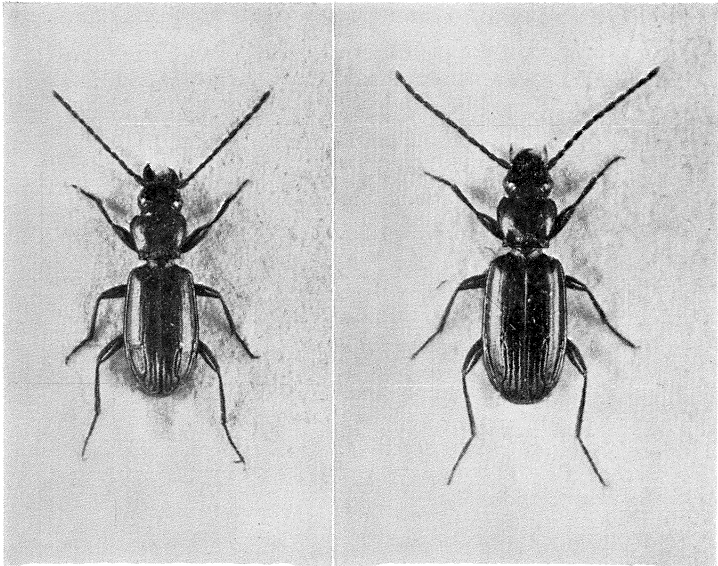
*Trechiana oreoides* n.sp. Suenson



*Trechiana ovalipennis* n.sp. Suenson

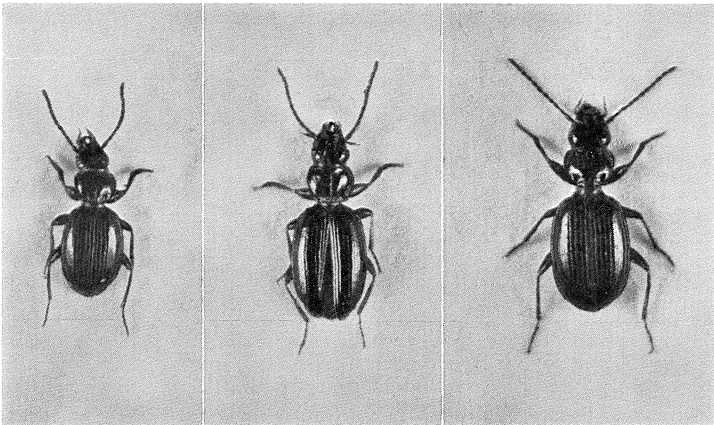


*Tienmutrechus  
diversipunctis* n.sp.  
Suenson



*Trechoblemus lindrothi* n.sp.  
Suenson

*Trechoblemus valentinei* n.sp.  
Suenson



*Trechus*  
*luxeni* n.sp.  
Jeannel

*Trechus*  
*suenisoni* n.sp.  
Jeannel. Holotype

*Trechus*  
*suenisoni* n.sp.  
Jeannel