

**DOPLŇKOVÉ POZNÁMKY KE R. KLEINEOVÝM „BESTIMMUNGS-  
TABELLEN“ S POPISY NOVÝCH DRUHŮ VÝCHODOASIJSKÝCH  
LYCIDŮ**

**SUPPLEMENTARY REMARKS TO R. KLEINE'S „BESTIMMUNGS-  
TABELLEN“ WITH THE DESCRIPTIONS OF NEW SPECIES OF EAST  
ASIATIC LYCIDAE**

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Čeled' *Lycidae* byla řadu let soustavně studována především zasloužilým německým badatelem R. KLEINEM, který kromě mnoha cenných pojednání o exotických druzích Lycidů zpracoval klíčově palaearktické druhy této čeledi ve známé sbírce REITTEROVÝCH „Bestimmungstabellen“. (Viz citaci literatury.) Význam této práce tkví v tom, že klíčově shrnuje dosavadní poznatky o této čeledi a tím zpřístupňuje palaearktický materiál pro další, hlubší zpracování, avšak má své určité nedostatky, o kterých se autor v předmluvě sám zmiňuje. Vzal jsem si tedy za úkol podle svých možností doplnit a opravit nedostatky tohoto klíče. V této práci pouze uvádím opravy a dodatky, ke kterým jsem dospěl hlavně při zpracovávání materiálů z japonského souostroví. Proto moje poznámky samozřejmě nemohou být kompletní. Kromě toho systematická práce v této čeledi je značně obtížná, jednak pro systematickou nepřehlednost této skupiny Coleopter, dále proto, že KLEINEOVA speciální sbírka Lycidů byla během války zničena náletem na Štětín (dle písemného sdělení prof. Dr. H. Sachtlebena), a autor sám zemřel dříve, než mohl stanovit neotypy. Nadto ještě zobrazování Lycidů je technickým kreslířským problémem a popisující autoři zřídka užívali dobrých ilustrací jako doprovod ke svým popisům. Dále se domnívám, že celá čeled' obsahuje daleko více variabilní druhy, než se dřívější autoři domnívali. Toto vše dává mi možnost podati pouze úryvkovité a vcelku různorodé poznámky o různých druzích. Zároveň chtěl bych poděkovati panu Takehiko Nakanemu za četný materiál a panu Milanu Klímovi za nakreslení ilustrací.

## Introduction

The family *Lycidae* was studied systematically for a number of years especially by the distinguished German author R. KLEINE, who in addition to many valuable papers on exotic species of the *Lycidae* also published a key of the palaearctic species of this family in the well-known collection of REITTER's determination tables "Bestimmungstabellen der europäischen Coleopteren" (see Bibliography). The importance of his work lies in the fact that in the key he summarizes all the knowledge available of this family and thus makes the palaearctic material accessible for further more detailed investigation, but his work has certain shortcomings, as indeed the author himself admits in his preface. Therefore I have set myself the task of supplementing and correcting the shortcomings of Kleine's key as far as possible. In the present paper I give only the corrections and supplements which I have obtained mainly by studying material from the Japanese archipelago. Thus my remarks cannot of course be considered complete. Besides, taxonomic work on this family is considerably difficult because of the considerable taxonomic intricacy of this group of the *Coleoptera*, further because KLEINE's special collection of *Lycidae* was destroyed in an air-raid on Stettin during the war, (according to a communication by letter of Professor Dr. H. Sachtleben) and the author died before he could establish the neotypes. Further, the figuring of the *Lycidae* constitutes a technical problem for the drawer, and the authors rarely used good illustrations to accompany their descriptions. Further I believe that the whole family contains far more variable species (see below) than the earlier authors imagined. All this prevents me from giving more than scattered remarks, on the whole not homogeneous, on the different species.

I wish to thank here Mr. Takehiko Nakane for the rich material which he placed at my disposal, and Mr. Milan Klíma for drawing the illustrations.

### A. Subfamily *Homalissinae*

This comprises mostly rare species restricted to the territory of Europe and the Caucasus. Only one species is more abundant, *Homalissus fontisbellaquei* FOURCR., which occurs as the only representative of this subfamily in Central Europe. Kleine was the first to draw attention to the question of its variability: "Über den Umfang der Variation wissen wir nicht viel, nur soviel ist sicher, daß *fontisbellaquei* ziemlich starke Farbenabweichungen erkennen läßt. Es kann also eine stärkere Variation vorhanden sein." The material from Czechoslovakia was studied microscopically (WINKLER and HAVELKA, 1951 l. c.) and a considerable morphological variability was ascertained, not a geographical, but an individual (perhaps an ecological) one due to parasitic development inside snails. Concerning the species *Homalissus minutus* PIC it can only be said that the very short description by PIC does not set forth the characters of the species, and it is not excluded that it is an extremely small specimen of *H. fontisbellaquei* FOURCR. KLEINE gives the diagnosis of PIC as follows:

"Schlank, glänzend, schwarz, Elytren und Beine bräunlich. 2. und 3. Fühlerglied kurz, die folgenden lang, schlank. Prothorax etwas breiter als hoch, mit vollständigem, fast geradem Seitenkiel. Elytren schlank, wenig stark und regelmäßig gerippt — gefurcht. 4 mm. — Italien." KLEINE gives the measurements of the length of the body for the species *fontisbellaquei* with 5—7 mm, for *minutus* with 4 mm. The material studied in the paper mentioned (WINKLER and HAVELKA 1951 l. c.) had exactly these measurements: Zbečno, Bohemia: length of the body 5.00 mm., length of the prothorax 0.92 mm., width of the prothorax 1.03 as minimum and Matliary, Slovakia: length of the body 7.00 mm, length of the prothorax 1.09 mm, width of the prothorax 1.41 mm as maximum. *Homaligus minutus* would thus be a specimen outside the range of the variability according to the paper mentioned. The exact taxonomic evaluation of *H. minutus* will be possible only after a careful comparison and measuring of the types.

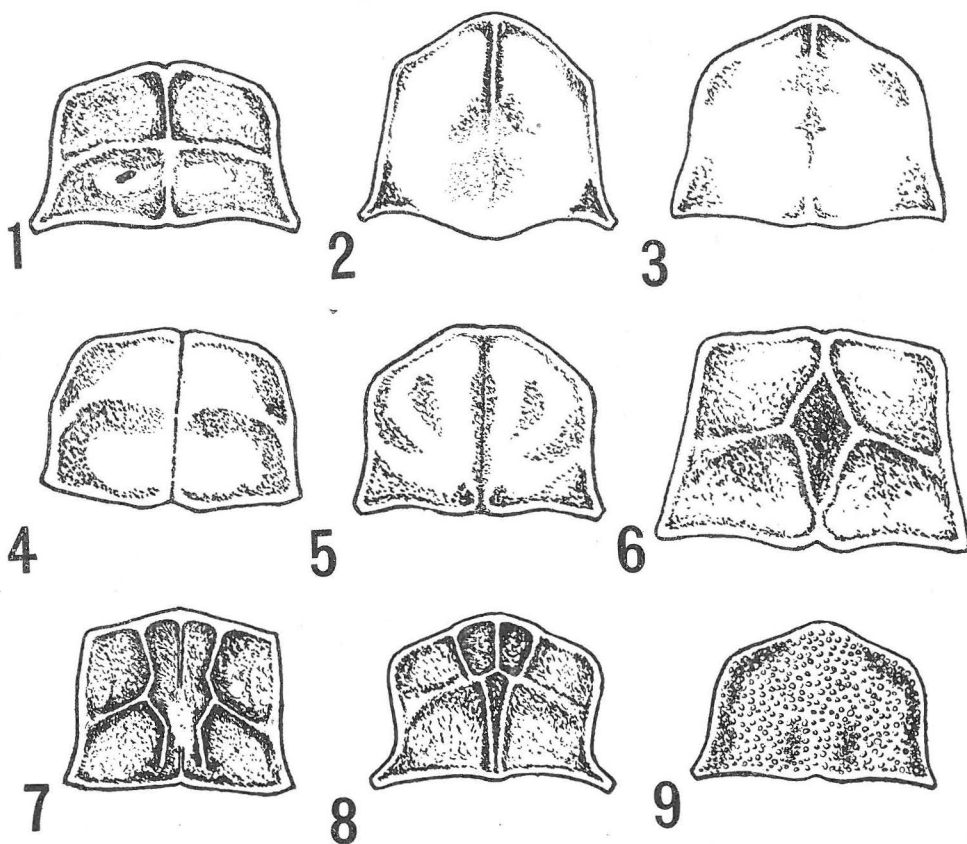
### B. Subfamily *Lycinae*

The remarks to the key to the tribes of the subfamily *Lycinae*: KLEINE's key begins as follows:

1. Der Prothorax ist glatt, ohne Areolen . . . . . 2
- Auf dem Prothorax ist wenigstens eine (diskoidale) Areole voll entwickelt vorhanden, meist sind es mehr (bis 7) . . . . . 5
2. Prothorax in der vorderen Hälfte scharf gekielt . . . . *Macrolycini*.

Then the key continues, and by it it is on the whole easy to distinguish the tribes *Macrolycini*, *Platerodini*, *Lygisterini*, and *Lycini*, and further the tribes *Cladophorini* and *Dictyopterini*, which have the prothorax with areolae. But if we are to determine according to this key, e. g. the species of the genus *Aplatopterus* REITTER we may easily arrive at a wrong determination, as the genus *Aplatopterus* has a secondarily reduced areola which is restricted to a mere sharp and powerful carina running out from the anterior shield, and to a transversal ridge similar to that which KLEINE calls "Querwulst" in German and which is characteristic for the tribe *Lygisterini*. In the genus *Aplatopterus* there is thus no areola in the true sense of the word but a cross-shaped formation composed of a longitudinal carina-like and a transversal "Querwulst-shaped" part. In the key we would thus necessarily arrive at the tribe *Macrolycini*, and this, of course, would be a mistake. In the further key to the tribe *Dictyopterini* KLEINE then evaluates quite correctly the shield of the genera *Aplatopterus* REITTER and *Eudictyoptera* BAROVSKIJ. In the antithesis to the 5. item of the key he writes: "Es fehlt jede Areole, der Prothorax ist durch einen Längs-und Querkiel verbunden . . . . . 6."

Thus it is possible to use the key of the tribe *Dictyopterini* in connection with the key to tribes prepared by me for the determination of the genera. This applies especially to the genus *Aplatopterus*. The genus *Eudictyoptera* BAROVSKIJ I know unfortunately only from the literature, and thus I cannot describe the structures on the shield in any greater detail. Also the genus *Pristolycus* GORHAM would be indeterminable (see below).



Shields of *Lycidae*: 1. *Aplatopterus*. 2. *Macrolycini*. 3. *Lycini*. 4. *Lygistropterini*. 5. *Platerodini*. 6. *Dictyopectera* (discoidal areola). 7. *Platycis*. 8. *Cladophorus*, 9. *Pristolycini*, new tribus.

The key has to be amended as follows:

1. Shield provided with *one or more areolae* (Figs. 6, 7, 8) . . . . . Tribes *Cladophorini* and *Dictyopterini*.  
(more detailed determination after KLEINE-idem 5, p. 17.)
- Shield *without* areoles (Figs. 1, 2, 3, 4, 5, 9) . . . . . 2
2. Shield with a sharp carina running out from the middle of the anterior margin. On the shield is a transversal furrow reaching attenuated the tip of the sharp carina running out from the middle of the anterior margin. Carina and furrow form together a cross-shaped structure (Fig. 1.) . *Dictyopterini*, Genus *Aplatopterus* (more detailed determination according to KLEINE, idem 5, p. 39.)

- Shield with a sharp carina, but without a transversal furrow forming with the carina a cross-shaped structure, or also without a carina (Figs. 2, 3, 4, 5) . . . . . 3
- 3. Shield with a sharp carina. (Fig. 2.) . . . . . *Macrolycini*.
- Shield always without a sharp carina, at most with a slight thickening in the middle of the anterior margin. (Fig. 3.) . . . . . 4
- 4. Elytra always with well visible primary and secondary costae, shield *without* a "Querwulst", nor are there any circular transparent structures on it . . . . . *Platerodini*.
- Elytra with well visible primary costae Either no secondary costation at all, or only very slightly visible . . . . . 5
- 5. "Querwulst" present (Fig. 4.) . . . . . *Lygistropterini*.
- "Querwulst" not present (Figs. 2, 3, 5.) . . . . . 6
- 6. No transparent circular structures on the shield. The reticulation of the elytra is irregularly flat-rugose . . . . . *Lycini*.
- Shield with transparent circular structures. (Fig. 9) Among costae no reticulation. (Intercostal structures very fine). . . . .  
 . . . . ., , *Pristolycini*, new.

#### a) Remarks to the Tribe *Cladophorini*

Genera *Cladophorus* GUÉRIN-MENEVILLE and *Cautires* C. O. WATERH.: These two genera differ in the number of the areoles. This number is variable so that these two genera are difficult to distinguish from each other. The generic valence of the two genera has to be studied only on the basis of the venation of the wings, and this is not possible within the limits of the present paper. The two species, described below, *nakanei* new species and *zahrádníki* new species I place provisionally to the genus *Cladophorus* GUÉRIN-MENEVILLE, as it is not excluded that later it will be necessary to transfer all the species of the genus *Cautires* C. O. WATERH. to the genus *Cladophorus* GUÉR.-MEN. if in the course of the further study of this question the genus *Cautires* proves to be a mere synonym of the genus *Cladophorus*.

#### *Cladophorus nakanei*, n. sp. (Fig. 10.)

This species is closely related to the species *Cl. kansuensis* KNE., differing from it by colour of elytra and prothorax.

(For comparison see KLEINE's key, l. c., p. 63 and 64.)

Description: Medium large species, ground colour of the prothorax brown, except the humeral part where the reddish hirsuteness of the ribs gives a reddish colour to this part in a microscopic inspection.

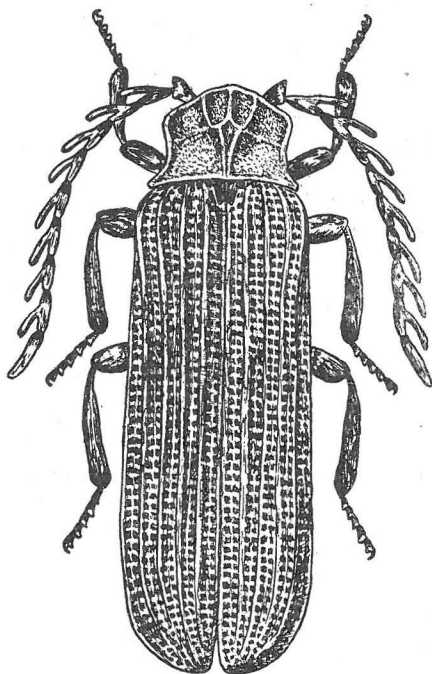
Head broad. Antennae ♂ long, comb-like. Antennae ♀ strongly saw-shaped, almost comb-shaped. Lamellae of the antennal articles shorter than in ♂. Antennae of both sexes brown, hirsute with fine, rather long hairs of

a golden yellow colour. The prothorax has a brown colour. The prothorax of ♂ is at the anterior margin, at the lateral margins, and in the posterior sharp corners red hirsute. Also the limits of the central areoles are red hirsute. The shield of ♀ does not carry any specially characteristic red hirsuteness. Legs brown. Scutellum of the same colour as the prothorax on the posterior margin strongly broken, with two sharp and lappet-shaped processes.

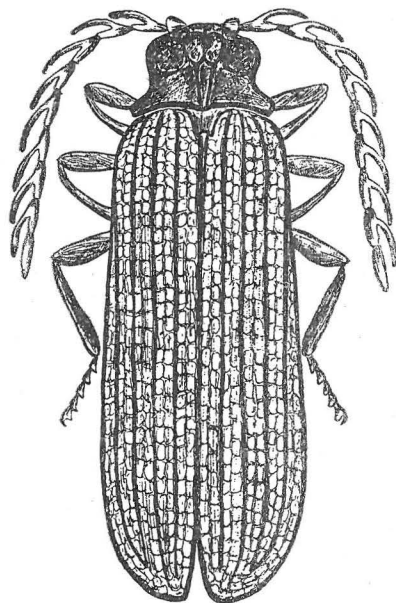
*Holotype*: ♂, Mt. Kooya, Wakayama, 26. 7. 1950, *Allotype*: ♀, Kiso-Fukushima, Japan, 24. 7. 1947, T. Nakane lgt., *Paratype*: ♀, Hirugano, Gifu, Japan, 4. 8. 1947, K. Ohbayashi lgt. — Named in honour of Mr. Takehiko Nakane.

***Cladophorus zahradníki*, n. sp. (Fig. 11.)**

This species differs from *Cl. sinensis* PIC by colour of elytra in general and from *Cl. kansuensis* KNE. by colour of prothorax and elytra. (For comparison see KLEINE's key, l. c., p. 63 and 64.)



10. *Cladophorus nakanei* n. sp.



11. *Cladophorus zahradníki* n. sp.

**Description:** Medium large species, of a light brown colour of the prothorax and elytra. Head broad and flat, tubercles on the base of the antennal hirsute with golden brown hairs. The antennae are composed of ten articles and are brown. From the second article long, arcuately comb-shaped.



The flat lamellae of the 2—10. articles of the antennae curve and lie to each other in the direction of the antenna. The tenth article of the antenna is spear-shaped. The whole antenna is hirsute, with short, golden-brown hairs. Prothorax light brown, anterior margin bordered by the anterior limit of the areolae. There are seven areoles and they are not specific for the different species. The lateral margins of the prothorax are very strongly bent inwards. The areoles near the anterior margin of the prothorax have a coarser structure. For the rest the prothorax has only a very faint structure. The anterior limit of the proximal areoles is connected by a short sharp carina with the distinct line of the anterior side of the shield, which has here to be regarded as the anterior margin of the shield. The whole prothorax is finely hirsute, with short golden brown hairs. Legs light brown, tibiae flat and hirsute, with longer golden brown hairs. Scutellum of the same colour as the prothorax, strongly broken at the posterior end, with two sharp, laciniate processes. Elytra brownish yellow, with a well developed costation. The primary costae are more, the secondary less coloured mat yellow by hairs. The suture of the elytra has not this coloration. Length of body: 8,2 mm.

*Holotype*: ♂, Echigo, Japan, VII. 1934, A. Nohira lgt. — The only specimen. — Named in honour of my friend, Dr Jiří Zahradník, our prominent Coccidologist.

#### b) Remarks to the Tribe *Dictyopterini*

See the remarks to the genera *Aplatopterus* REITTER and *Eudictyoptera* BAROVSKIJ below.

To the genus *Dictyoptera* LATR.:

The recently described new Japanese species of this genus, *Dictyoptera elegans* NAKANE & J. R. WINKLER is very easily distinguished from all other known species by the coloration of the shield and elytra. The shield is bright red, the elytra are lustreless black. Thus there is no need to insert this species in the key of the genus *Dictyoptera*. It might perhaps be confused with *D. granicollis* KIESENW., which has black elytra, but not a red prothorax, but KÔNO placed this species in 1923 in the genus *Ponyalis* FAIRM. (According to a communication by letter from Mr. Takehiko Nakane — the exact reference is not known to me.) Thus the palaearctic fauna of the *Lycidae* is enriched by another genus. I have not yet material enough for placing the genus *Ponyalis* in the key of the tribe *Dictyopterini*.

Further I give the description of a new species of the genus *Aplatopterus* REITT.: *A. nakanei* n. sp.

#### *Aplatopterus nakanei*, n. sp. (Fig. 13.)

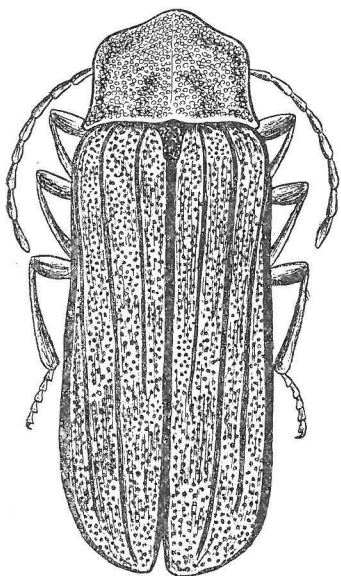
This species is related to the species *A. lineatus* GORH., differing from it by the following marks:

(For comparison see KLEINE's key pp. 58 and 60.)

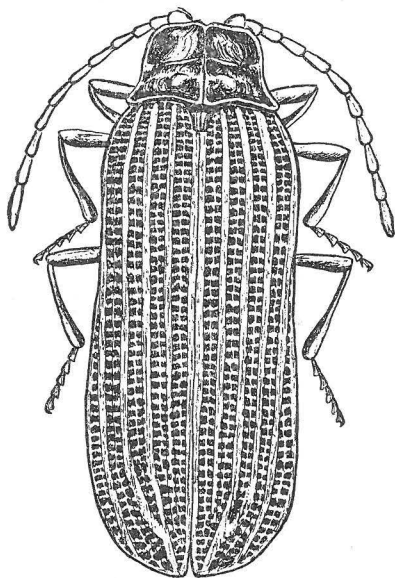
Description: Similar and related to the species *A. lineatus* GORH., characterised as follows:

Medium large species, with a brownish black shield, with brownish black elytra which have distinctly red-haired costae.

Head broad, tubercles at the base of the antennae sparsely hirsute with silvery gray hairs. The antennae reach approximately to the middle of the elytra. The first (basal) article of the antennae is sparsely and irregularly



12. *Pristolytus sagulatus* GORH.



13. *Aplatopterus nakanei* n. sp.

pitted, powerful, the second article is the shortest one, spindle-shaped, the third article is longer by about one third than the second article, the fourth to tenth articles of the antennae are wedge-shaped, densely brown hirsute, the tenth article of the antennae is long, conical, in the first two thirds cylindrical, then abruptly narrowing conically. Prothorax brownish. Prothorax brownish black, brilliant, anterior margin of the prothorax in the middle finely broken, posterior margin with sharp points. The longitudinal carina is thin and sharp and fuses with the transversal furrow of the shield. Above the posterior margin of the shield are two projecting uniform tubercles. The whole shield is slightly hirsute, with lighter brown hairs. Legs brownish black, shiny. Elytra with well developed primary and secondary costae, ground colour of the elytra brownish black, suture, primary costae and outer margin of the elytra composed of irregular squares, rectangles and a few pentagons. Length of the body: 9.5 mm.

*Holotype*: ♀, Shimashima-dani (near Kamikochi), Japan, 29. VII. 1951, T. Nakane lgt. — Named in honour of the collector.



c) Remarks to the Tribe *Macrolycini*

Genus *Macrolycus* C. O. WATERH.:

Mr. T. Nakane has informed me that he ascertained a considerable variability in the Japanese species of the genus *Macrolycus*. In my material I ascertained also certain deviations. Mr. Nakane's results will certainly be of fundamental importance, as we know hardly anything about the variability of the East Asiatic species.

d) Remarks to the Tribe *Lygistropterini*

*Lygistropterus sanguineus* L.:

In the material measured from Czechoslovakia I ascertained a considerable variability of the prothorax in this species. I shall deal with this variability in another paper.

e) Remarks to the new Tribe *Pristolycini*

The type of this new tribe is the species *Pristolycus sagulatus* GORH. (Fig. 12.) GORHAM described this new genus and species in the "Transactions Ent. Soc. London", 1883, p. 407, pl. XVII., f. 8. Since then the genus *Pristolycus* GORH. has not been mentioned in literature. It is not given in KLEINE's "Bestimmungstabellen" nor in the world catalogue of the family *Lycidae* (l. c.). Only in the work recently published, *Iconographia Insectorum Japonicorum* (l. c.), is this species listed and very well figured. But none of the other systematic works on *Coleoptera* mentions it at all. I owe the reference to the original description again to Takehiko Nakane, through whose kindness I received two specimens. This enabled me to study this species more in detail. *Pristolycus sagulatus* is morphologically so different from all representatives of the family *Lycidae* that it deserves to be placed in a separate tribe.

The new tribe may be characterised as follows: Prothorax rounded in front, fairly arched, with a circular translucent punctuation, smoky brownish gray, without any carinae and ridges, only with a longitudinal dividing furrow. Elytra pink with only three primary costae of different length: the first costa disappears in about  $\frac{2}{3}$  of the length of the elytra, the second costa is the longest, reaching almost the tip of the elytra, the third costa is a little shorter than the second. The elytra are bordered black, suture also black, but costae pink. Reticulation completely reduced to a mere punctuation of the elytra.

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## СОДЕРЖАНИЕ

В этой работе автор подает замечания, которыми дополняет работу немецкого специалиста Р. Клейне о палеарктических видах семейства *Lycidae*. В этой работе надо было оправить и дополнить определительную таблицу триб, в которой небыло например систематических знаков для рода *Aplatopterus* РЕЙТЕР, так же автор подает новую определительную таблицу триб.

В этой работе также описана новая триба *Pristolycini* и три новые вида: *Aplatopterus nakanei* n. sp., *Cladophorus nakanei* n. sp., и *Cladophorus zahrádníki* n. sp. из Японии. В работе тоже замечания к различным трибам семейства *Lycidae*.

Автор тоже пишет о вариабельности этого семейства.

Рисунки: Милан Клима.