

## New species of the genera *Pachypidonia* Gressitt, 1935 and *Katarinia* Holzschuh, 1991 (Coleoptera: Cerambycidae) from China

### НОВЫЕ ВИДЫ РОДОВ *Pachypidonia* Gressitt, 1935 и *Katarinia* Holzschuh, 1991 (Coleoptera: Cerambycidae) из Китая

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KEY WORDS: Coleoptera, Cerambycidae, Lepturinae, Lepturini, *Pachypidonia*, *Katarinia*, new species, China.

КЛЮЧЕВЫЕ СЛОВА: Coleoptera, Cerambycidae, Lepturinae, Lepturini, *Pachypidonia*, *Katarinia*, новые виды, Китай.

ABSTRACT. Three new species of the genera *Pachypidonia* Gressitt, 1935 and *Katarinia* Holzschuh, 1991 from China are described: *P. tavakiliani* sp.n. (Yunnan Province), *K. murzini* sp.n. (Shaanxi Province) and *K. belousovi* sp.n. (Yunnan Province). *Pachypidonia tavakiliani* sp.n. is the first member of the genus to be reported from continental China.

РЕЗЮМЕ. Даны описания трёх новых видов родов *Pachypidonia* Gressitt, 1935 и *Katarinia* Holzschuh, 1991 из Китая, в том числе, *P. tavakiliani* sp.n. (Юньнань), *K. murzini* sp.n. (Шэньси) и *K. belousovi* sp.n. (Юньнань). Отмечено, что *P. tavakiliani* sp.n. является первым представителем рода для материковой части Китая.

#### Introduction

Each of the genera *Pachypidonia* Gressitt, 1935 and *Katarinia* Holzschuh, 1991, which belong to the tribe Lepturini, include only few species. The former of these genera contains the Japanese *P. bodemeyeri* (Pic, 1934), the Taiwanese *P. rubrida rubrida* Hayashi, 1971, the North Laotian *P. rubrida huaphana* Holzschuh, 2010, as well as *P. masakoae* Kusakabe, 2009, from northern Myanmar. The latter genus comprises only three Chinese species, namely, the Sichuan *K. cephalota* Holzschuh, 1991 and *K. teledapoides* Holzschuh, 1998, and the Yunnan *K. consanguinea* Holzschuh, 2006. To my mind, any addition to the species composition of these genera may be of considerable interest.

This paper provides descriptions of three new species of these genera from China, including one species

of *Pachypidonia* from Yunnan Province and two species of *Katarinia* from Shaanxi and Yunnan provinces, respectively.

The material this paper is based upon comes from the following institutional and private collections:

MNHN — Muséum national d'Histoire naturelle, Paris, France;

OMNH — Osaka Museum of Natural History, Osaka, Japan;

cCH — coll. Carolus Holzschuh (Villach, Austria);

cSM — coll. Sergey Murzin (Moscow, Russia);

cSMC — coll. Satoshi Maru (Chiba-shi, Chiba Prefecture, Japan);

cBWX — coll. Wen-Xuan Bi (Shanghai, China).

#### *Pachypidonia tavakiliani* Miroshnikov, sp.n.

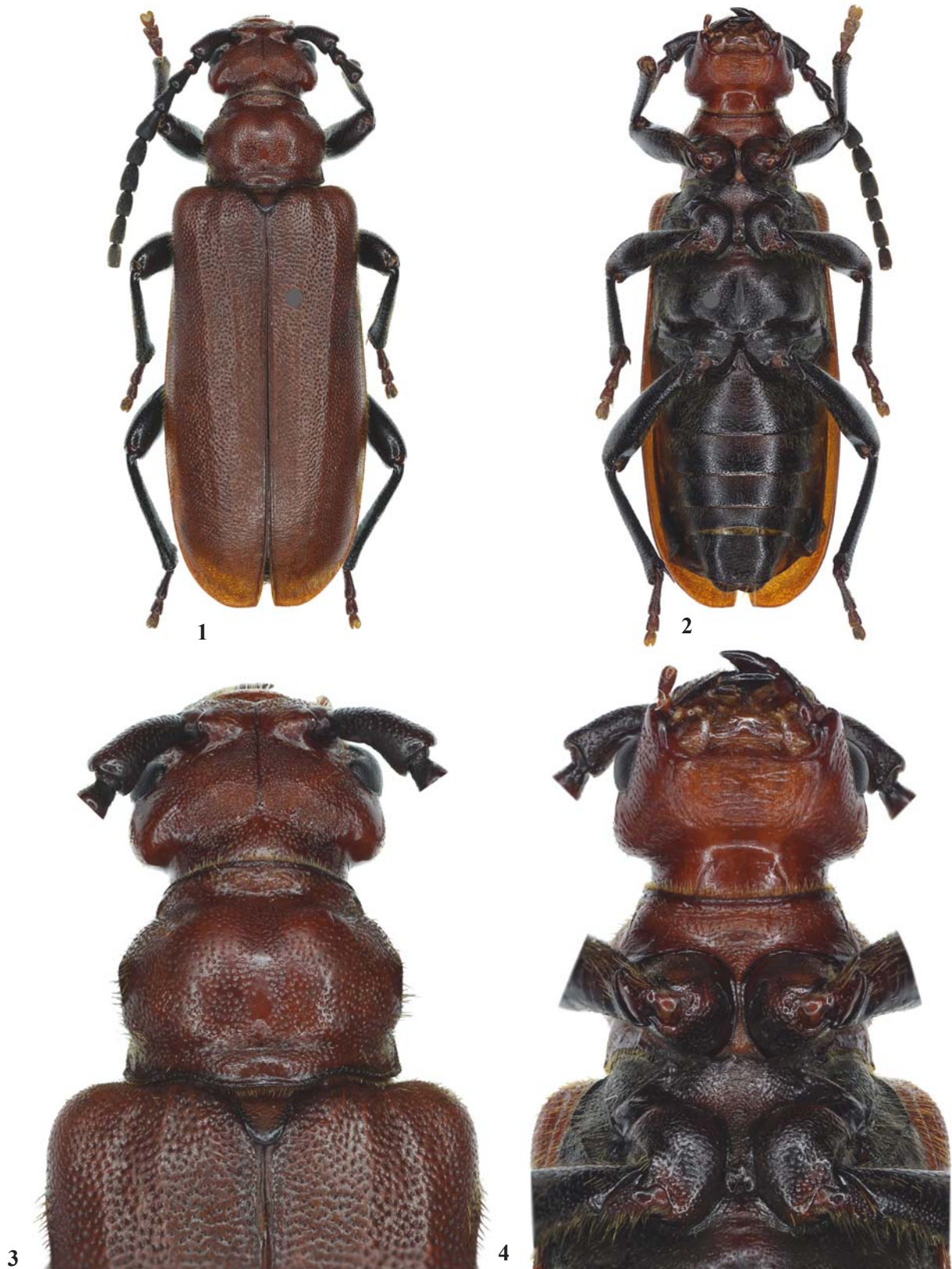
Figs 1–4.

MATERIAL. Holotype ♀ (MNHN), “[China] N. Yunnan, Tse-kou [now Yanmen; 28°04'N / 98°54'E], 1896”, “Muséum Paris 1952 coll R. Oberthur”.

DIAGNOSIS. This new species, at least based on the structure of the female, differs very clearly from all congeners (see Remarks) by the evidently more robust body, the wider head and pronotum, the elytra clearly more strongly broadened behind the middle, the shorter antennae with many of the antennomeres being less strongly elongated, and the more robust and shorter legs.

DESCRIPTION. Female. The holotype lacks the left last antennomere, the right antennomeres 4–11, the right anterior tarsus, and the last tarsomeres of all remaining tarsi.

Body length 15.6 mm, humeral width 4.95 mm, greatest width behind middle of elytra 5.5 mm. Head and elytra entirely, prothorax almost completely, scutellum mostly red; antennomere 1 predominantly dorsally, antennomeres 2–4 at apex red-brown tones, remaining surface brown-black; prothorax along margins of apex, base, prosternal process and before coxae, as well as scutellum along lateral



Figs 1–4. *Pachypidonia tavakiliani* sp.n., holotype female: 1–2 — habitus, dorsal and ventral views, respectively; 3 — head, pronotum and base of elytra; 4 — head, ventral view, and pro- and mesosterna.

Рис. 1–4. *Pachypidonia tavakiliani* sp.n., голотип, самка: 1–2 — общий вид сверху и снизу, соответственно; 3 — голова, переднеспинка и основание надкрылий; 4 — голова снизу, простернум и мезостернум.

margins and at apex strongly infuscate; eyes, antennomeres 5–10 (see Remarks) entirely, mandibles predominantly in apical part, mesosternum partly, metasternum almost complete, sternites (visible) 1–4 in apical part, last (visible) sternite and tergite almost completely, pro- and mesocoxae partly, metacoxae mostly, profemora partly, mesofemora at base, metafemora almost entirely, protibiae in apical part mostly, meso- and metatibiae almost completely black; mesosternum mostly, metasternum in area of midline in apical part, sternites (visible) 1–4 predominantly in basal part, all coxae partly one way or another, profemora mostly at base, protibiae at base and apex, meso- and metatibiae mainly at apex, tarsi almost entirely red and red-brown tones with this or that colour intensity; profemora partly, mesofemora almost completely and metafemora at the very base black-brown with a reddish tint; almost entirely shiny, only antennomere 5 partly and subsequent antennomeres completely dull, without shine.

Head large, wide, but noticeably narrower than pronotum at level of lateral tubercles; with weakly developed antennal tubercles, with a sharp median suture between them and eyes; dorsally with a clear, predominantly very dense and confluent puncturation; genae very well-developed, slightly longer than transverse diameter of eye, with a clear, heterogeneous, irregular, partly dense puncturation, smaller predominantly at inner margin of eyes; temples long, strongly expressed, subequal to transverse diameter of eye, broadly rounded posteriorly, with a clear puncturation mainly posteriorly and ventrally; eyes moderately convex, with a well-developed emargination; submentum sharply expressed, with distinct, transverse wrinkles and sparse punctures mostly on sides; gula with gentle, transverse, sparse wrinkles; on either side lateral to submentum mainly with clear, numerous punctures, on either side lateral to gula with sharp, transverse folds; antennae short, barely not reaching the anterior border of second one-third of elytra (taking into account a presumed length of last antennomere; see Remarks) (in females of the compared taxa noted in Remarks, antennae clearly longer, at least almost or distinctly reaching the middle of elytra); antennomere 2 barely longitudinal; antennomere 5 widest at apex compared to other antennomeres, except for 1<sup>st</sup>; length ratio of antennomeres 1–10, 56: 18: 28: 30: 35: 28: 29: 26: 29: 26; antennomeres 1–4 and basal part of antennomere 5 with a clear puncturation, antennomeres 6–10 (obviously last one as well) and apical part of antennomere 5 with an unclear sculpture.

Pronotum clearly transverse, at level of lateral tubercles 1.24 times as wide as long (in females of the compared taxa only 1.12–1.15 times); base 1.5 times as wide as apex; before apex with much sharper constriction than in front of base; with well-expressed, obtusely angulate tubercles; with a rough, irregular, partly dense, in places rather sparse puncturation; with a clear, smooth, narrow, longitudinal, median area.

Scutellum triangular, in apical part noticeably impressed, at apex broadly rounded, mostly clearly punctured.

Elytra broad, slightly elongated, 2.27 times as long as humeral width; most clearly broadened in second one-third; each elytron on disk with two clear, longitudinal ribs weakened before apex; with a rough, moderately dense, rather uniform puncturation; at apex on external side broadly rounded, apical sutural angle almost straight.

Prosternal process narrow between coxae, very strongly broadened at apex; mesosternal process rather long, mostly subparallel-sided, only near apex slightly broadened, at

apex with a deep emargination, almost 3 times as wide as prosternal process between coxae; metasternum with a sharp median suture, in area of which, predominantly in apical half, with a clear impression; last (visible) sternite from base strongly narrowed towards apex, base 2.1 times as wide as long and 1.7 times as wide as width at apex, in apical half clearly impressed, at apex very broadly rounded; last (visible) tergite at apex with a moderately deep emargination; venter mostly with a clear, heterogeneous, partly rugose puncturation.

Legs robust, short; metatarsomere 1 subequal in length to next two metatarsomeres combined.

Head, body and legs with sparse, predominantly suberect, partly recumbent, thin, golden setae (strongly abraded in holotype, especially dorsally); antennomeres 1–4 with much sparser setation than antennomeres 6–10 (obviously last one as well) and a part of antennomere 5; setation of erect setae weakly developed.

REMARKS. I have examined pictures of the females of *P. bodemeyeri*, *P. rubrida rubrida* and *P. rubrida huaphana*, which I received from Mr. Satoshi Maru (Chiba-shi, Chiba Prefecture, Japan) (via Dr. Nobuo Ohbayashi; Kamimiyada, Miura City, Japan), Mr. Shigehiko Shiyake (Osaka Museum of Natural History, Japan) and Mr. Luboš Dembický (Brno, Czech Republic), respectively. The underlying material is kept at cSMC, OMNH and cCH, respectively. The female of *P. masakoe* remains unknown yet. However, based on the structure of the male of this latter species and its similarity to the male of the former three taxa [Kusakabe, 2009], the female of *P. masakoe* is likely to have more strongly resemble their females than that of *P. tavakilianii* sp.n.

*Pachypidonia tavakilianii* sp.n. is the first member of the genus to be reported from continental China.

ETYMOLOGY. The new species honours my colleague, Dr. Gérard L. Tavakilian (MNHN), who kindly renders me his help not only in obtaining the material kept in the Paris Museum, but also in providing additional information important for my studies.

### *Katarinia murzini* Miroshnikov, sp.n.

Figs 5, 7.

MATERIAL. Holotype ♂ (cSM), China, Shaanxi Prov., Zhouzhi env., Taibaishan nat. park, 1350 m, 34°01'N / 108°06'E, 30.V.1999, leg. S. Murzin.

DIAGNOSIS. This new species, at least in the structure of the male, strongly resembles *K. cephalota* and *K. consanguinea*, but differs clearly from both by the slightly longer antennae, the more elongated median antennomeres, and peculiar length ratios of antennomeres 3–5. In addition, it differs from *K. cephalota* by the elytra being less strongly narrowed towards the apex, and the monochrome black femora and tibiae, from *K. consanguinea* by the wider pronotum and its particular sculpture, and the larger scutellum. *Katarinia murzini* sp.n. resembles also the male of *K. teledapoides* (see Remarks), but differs at least by the monochrome black femora and tibiae, the larger scutellum, the wider pronotum and its seemingly less sharp lateral tubercles.

DESCRIPTION. Male. Body length 10.7 mm, humeral width 3.0 mm. Head, antennomere 1, pronotum, scutellum, venter, except for sternites, femora, tibiae and almost entirely tarsi black; elytra yellow with black and partly brown-black fasciae and spots, as in Fig. 5; antennomeres 2–5 black-brown with a brown-red base, remaining antennomeres from dark brown to brown with a more or less expressed reddish



Figs 5–8. *Katarinia* spp., holotypes males, dorsal views: 5, 7 — *K. murzini* sp.n.; 6, 8 — *K. belousovi* sp.n.; 5–6 — habitus; 7–8 — head, pronotum and base of elytra.

Рис. 5–8. *Katarinia* spp., голотипы, самцы, сверху: 5, 7 — *K. murzini* sp.n.; 6, 8 — *K. belousovi* sp.n.; 5–6 — общий вид; 7–8 — голова, переднеспинка и основание надкрылий.

base; sternites reddish yellow; tarsi partly lighter; elytra with a moderate shine.

Head large, wide, 1.2 times as broad as pronotum at level of lateral tubercles; with very well-developed antennal tubercles, bases of which at midline almost touching each other; dorsally with a rough, predominantly very dense and confluent, scabrous puncturation; temples long, strongly expressed, subequal to transverse diameter of eye, broadly rounded posteriorly; eyes moderately convex, with a well-developed emargination; antennae noticeably longer than body, extended behind apex of elytra by penultimate antennomere; antennomere 2 clearly longitudinal; antennomeres 3 and 4 combined only 1.07 times as long as antennomere 5 (in *K. cephalota* and *K. consanguinea*, not less than 1.3 times as long); length ratio of antennomeres 1–11, 36: 15: 29: 29: 54: 54: 57: 54: 54: 54: 71.

Pronotum transverse; base 1.23 times as wide as long and 1.28 times as wide as width at apex; at base and apex with a sharp constriction; lateral tubercles broadly rounded; disk with a pair of sharply expressed tubercles flanking midline, also with a median tubercle near base; with a rough, dense, partly confluent puncturation.

Scutellum relatively large, slightly longitudinal, at apex broadly rounded.

Elytra barely narrowed towards apex; 2.5 times as long as humeral width; at apex broadly rounded; slightly diverging along suture at the very apex; with a clear, shallow, more or less uniform puncturation weakened towards apex.

Prosternal process very narrow between coxae, moderately broadened at apex; mesosternal process not more than 3 times as wide as prosternal process between coxae; last (visible) sternite broadly rounded at apex, with a very weak impression near the very apex.

Legs long, slender; metatibia, except for spurs, and metatarsus subequal in length; metatarsomere 1 about equal in length to next two metatarsomeres combined.

Head mostly, pronotum laterally, elytra laterally predominantly in basal part, venter and partly legs (predominantly femora) with more and less long, erect and suberect, sparse, thin, light setae while both pronotum and elytra dorsally with shorter, predominantly suberect, similar setae; sparse, suberect, light setae most noticeable on several basal antennomeres.

REMARKS. *Katarinia teledapoides* was described from a single female [Holzschuh, 1998]. I have examined a picture of the male (cBWX) of this species, received from Mr. Wenxuan Bi (Shanghai, China). Another photograph of a male, taken together with a female (in copula), has recently been published [Švácha, Lawrence, 2014: 86, fig. 2.4.7, N].

ETYMOLOGY. The new species honours my colleague and friend, Dr. Sergey V. Murzin (Moscow, Russia), who collected the holotype and, over the many years, supports my entomological research.

***Katarinia belousovi* Miroshnikov, sp.n.**

Figs 6, 8.

MATERIAL. Holotype ♂ (cSM), China, Yunnan Prov., Zhongdian env., 3800–4100 m, 13.VII.2007, leg. I. Belousov & I. Kabak.

DIAGNOSIS. This new species, at least in the structure of the male, strongly resembles *K. cephalota*, *K. consanguinea* and *K. murzini* sp.n., but differs clearly from them by the shorter and almost entirely black antennae, the shorter tarsi, at least the shorter metatarsus in relation to the metatibia. In addition, it differs from *K. murzini* sp.n. by the presence of longitudinal ribs on the elytra, the peculiar length ratios of

antennomeres 3–5, the clearly less strongly expressed tubercles on the pronotum disk on either side of the midline, and the shorter and seemingly more shiny elytra. The new species also resembles the male of *K. teledapoides* (see above), but differs at least by the almost black antennae, the monochrome black femora and tibiae, the wider pronotum and the shorter elytra.

DESCRIPTION. Male. Body length 12.0 mm, humeral width 3.6 mm. Head, antennae, except for reddish the very bases of antennomeres, pronotum, scutellum, venter, except for sternites, femora, tibiae and almost entirely tarsi black; elytra yellow with black and partly brown-black fasciae and spots, as in Fig. 6; sternites yellowish red; tarsi partly lighter; elytra with a strong shine.

Head large, wide, 1.07 times as broad as pronotum at level of lateral tubercles; with very well-developed antennal tubercles, bases of which noticeably separated predominantly by a smooth space and, partly, clear median groove; dorsally with a rough, predominantly very dense and confluent, scabrous puncturation; temples long, strongly expressed, subequal to transverse diameter of eye, broadly rounded posteriorly; eyes moderately convex, with a well-developed emargination; antennae barely not reaching the apex of elytra; antennomere 2 barely longitudinal; antennomeres 3 and 4 combined 1.42 times as long as antennomere 5; length ratio of antennomeres 1–11, 39: 15: 32: 29: 43: 51: 51: 52: 49: 46: 59.

Pronotum transverse; base 1.26 times as wide as long and 1.26 times as wide as width at apex; at base and apex with a sharp constriction; lateral tubercles broadly rounded; disk with a pair of clear, but not sharply expressed tubercles flanking midline, also with a median tubercle near base; with a rough, very dense, predominantly confluent puncturation.

Scutellum clearly longitudinal, narrowed towards apex, at apex narrowly rounded.

Elytra nearly parallel-sided; 2.3 times as long as humeral width; at apex broadly rounded, but noticeably diverging along suture at apex (yet obviously deformed in holotype); each elytron on disk with two distinct, longitudinal ribs, occupying most of elytra; with a clear, partly irregular puncturation well-expressed almost to the very apex.

Prosternal process narrow between coxae, strongly broadened at apex; mesosternal process not more than 3 times as wide as prosternal process between coxae; last (visible) sternite broadly rounded at apex, with a very weak impression near the very apex.

Legs long, slender; metatibia, except for spurs 1.17 times as long as metatarsus; metatarsomere 1 subequal in length to next two metatarsomeres combined. The holotype lack the right posterior both tibia and tarsus.

Head mostly, pronotum laterally, elytra laterally predominantly in basal one-third, venter and partly legs (mainly femora) with more and less long, erect and suberect, sparse, thin, light setae, while pronotum and elytra dorsally with short, predominantly suberect, similar setae; sparse, suberect, light setae most noticeable on several basal antennomeres.

ETYMOLOGY. The new species honours my colleague and friend, Dr. Igor A. Belousov, who, together with Dr. Ilya I. Kabak (both All-Russian Institute of Plant Protection, St. Petersburg, Russia), collected the holotype.

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Sergey V. Murzin who has provided some specimens from his private collection and has arranged the receipt of another material for research. My sincere thanks also to Luboš Dembický, Satoshi Maru and Shigehiko Shiyake for the pictures of the females of *Pachypidonia* species, as well as to Wenxuan Bi for the illustrations of some specimens of *Katarinia* species and again to Luboš Dembický for the pictures of the holotypes of *K. cephalota* and *K. consanguinea*. I am very grateful to Nobuo Ohbayashi who has arranged the receipt of some pictures for research and to Sergey O. Kakunin (Krasnodar, Russia) for his help in the preparation of photographs.

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