Studies and Reports
Taxonomical Series 21 (2): 273-280, 2025

Paracupta (*Chalcotaenia*) *jana* sp. nov. from Indonesia (Coleoptera: Buprestidae: Chrysochroinae)

David FRANK

Kotorská 22, 140 00 Praha 4, Czech Republic
e-mail: davidfrank@email.cz

Taxonomy, nomenclature, new species, Buprestidae, *Paracupta*, *Chalcotaenia*, Oriental Region, Indonesia

Abstract. New species of the subgenus *Chalcotaenia* of *Paracupta* (Coleoptera: Buprestidae: Chrysochroinae) is described: *Paracupta* (*Chalcotaenia*) *jana* sp. nov. from Indonesia: Seram and Wruwarez islands. This species is illustrated with colour photographs of habitus. A key to all species of the subgenus *Chalcotaenia* is presented.

INTRODUCTION

Paracupta and *Chalcotaenia* were established by Deyrolle (1864) as two separate genera. Théry (1926) downgraded *Chalcotaenia* to a subgenus of the genus *Chrysodema* Laporte de Castelnau & Gory, 1837, but following authors did not accept this change and considered *Chalcotaenia* a valid genus. Hołyński (1997) downgraded *Chalcotaenia* to a subgenus of *Paracupta* with species *P.* (*C.*) *lamberti* (Laporte de Castelnau & Gory 1837), *P.* (*C.*) *isballina* Kerremans, 1900 and *P.* (*C.*) *xanthocera* (Boisduval, 1835). Bellamy (1998) did not follow the Hołyński's concept and designated *Buprestis xanthocera* Boisduval, 1835 as the type-species of the genus *Paracupta*. Hołyński (2009) later synonymised *Chalcotaenia* with *Paracupta*, but reversed this decision in Hołyński (2014), reinstating *Chalcotaenia* as a monotypic subgenus of *Paracupta* (see Frank, 2024, for further details).

The subgenus *Chalcotaenia* was revised by Frank (2024) and contained eight species (four of which were described as new): *Paracupta* (*Chalcotaenia*) *gottwaldi* Frank, 2024; *P.* (*C.*) *horaki* Frank, 2024; *P.* (*C.*) *isabellina* Kerremans, 1900; *P.* (*C.*) *jakli* Frank, 2024; *P.* (*C.*) *lamberti* (Laporte de Castelnau & Gory, 1837); *P.* (*C.*) *laperousei* Frank, 2024; *P.* (*C.*) *rennelli* Hołyński, 2014 and *P.* (*C.*) *toxopeusi* Obenberger, 1932. The ninth species *Paracupta* (*Chalcotaenia*) *jana* sp. nov. from Seram and Wruwarez islands (Indonesia) is described herein.

MATERIAL AND METHODS

The revision is based on the study of type material and additional available specimens.

The length of body was measured as the distance between the anterior margin of head and the apex of elytra. The width of body was measured at the widest point across elytra.

State and provinces names follow the conventions used by Wikipedia (en.wikipedia.org).

Verbatim label data are cited for both type specimens: a double vertical line (||) divides

the data on different labels and a single vertical line (|) divides the data in different rows. Other comments and remarks are placed in square brackets: [p] - preceding data are printed, [h] - preceding data are handwritten, [w] - white label, [r] - red label.

Both examined type specimens were provided with an additional red printed label (with handwritten date) expressing the type status of each specimen.

The Key to species is an updated version of Frank (2024).

Examined specimens are deposited in following collections:

DFPC David Frank collection, Praha, Czech Republic;
SGBG Stephan Gottwald collection, Berlin, Germany.

TAXONOMY

Paracupta (*Chalcotaenia*) Deyrolle, 1864

Chalcotœnia [sic!] Deyrolle (1864): 12 (original description in key to genera); Gemminger & Harold (1869): 1356 (catalogue, as synonym of *Chalcophora*); Saunders (1871): 15 (catalogue); Kerremans (1892): 43 (catalogue); Kerremans (1893): 105 (key to genera); Kerremans (1903): 76 (catalogue); Heyne & Taschenberg (1908): 133 (noted); Kerremans (1909): 1 (monograph), 3-4 (key to species); Carter (1921): 304 (key to genera); Obenberger (1926): 145 (catalogue); Carter (1929): 301 (catalogue); Matthews (1985): 4, 24 (pictorial key to genera); Bellamy (1985): 415 (catalogue); Bellamy (1986): 594 (catalogue); Hołyński (1993): 13 (catalogue), 21 (phylogeny); Volkovitsh (2001): 66 (classification, phylogeny); Bellamy (2002): 51 (catalogue); Hołyński (2009): 264 (as synonym of *Paracupta*); Williams, Mitchell & Sundholm (2024): 66 (monography, noted).
Chrysodema (*Chalcotaenia*): Théry (1926): 66 (key to subgenera).
Paracupta (*Chalcotaenia*): Hołyński (1997): 184 (classification, phylogeny), 188 (catalogue); Bellamy (2003): 33 (catalogue); Bellamy (2008): 501 (catalogue); Hołyński (2014): 405 (key to subgenera), 408 (Fig. 4), 410 (classification, remarks); Frank (2024): 541 (revision).

Type species: *Chrysodema lamberti* Laporte de Castelnau & Gory, 1837 by monotypy.

Key to species of *Paracupta* (*Chalcotaenia*) Deyrolle, 1864

1 Tarsi completely or partly yellow. 2
- Tarsi completely metallic. 4
2 Pronotum with well developed five longitudinal sulci. 3
- Pronotum with well developed only medial sulcus; intermedial and lateral sulci only very slightly indicated and reduced; dorsal side black-violet with green macropunctures; costae and intercostae weak but well developed; ventral side and legs dark green. Buru Is. ..... *P.* (*C.*) *toxopeusi* Obenberger, 1932
3 Elytral costae weak, sharp and dark, intercostae can be slightly indicated, macropunctures on elytra coarser. 4
- Elytral costae wide, rounded and golden-green, intercostae not developed, macropunctures on elytra very fine. Indonesia: Seram Is., Wruwarez Is. Figs. 1-3, 5, 6. ..... *P.* (*C.*) *jana* **sp. nov.**
4 Ventral side light green with golden reflections, strongly shiny; dorsal side generally greener; ♀ ventrite V with broad (almost trapezoidal) notch; parameres open from apical third. Indonesia: Seram Is. .... *P.* (*C.*) *horaki* Frank, 2024
- Ventral side dark green, moderately shiny; dorsal side generally darker; ♀ ventrite V with small 'U' notch; parameres open from mid-length. Indonesia: Bacan Is., Halmahera Is. ..... *P.* (*C.*) *laperousei* Frank, 2024
5 Pronotum with five longitudinal sulci; antennomeres III-XI brown or yellow. 6
- Pronotum with three longitudinal sulci; antennomeres III-XI black; dorsal side brown-violet with green lateral parts, macropunctures of pronotum, and intercostal areas; macropunctation of elytra fine, without metallic borders; ventral side and legs green. Australia. ..... *P.* (*C.*) *lamberti* (Laporte de Castelnau & Gory, 1837)

6 Intercostae not developed or slightly indicated; macropunctures in intercostal areas joined, separated only on costae. 7
- Intercostae well developed; macropunctures in intercostal areas separated; sulci on pronotum and intercostal areas green. Solomons: Guadalcanal Is., Malaita Is., Tulagi Is., Russell Is. ..... *P.* (*C.*) *jakli* Frank, 2024
7 Ventral side green. 8
- Ventral side brown-violet; sulci on pronotum and intercostal areas bronze. Solomons: Rennell Is. .... *P.* (*C.*) *rennelli* Hołyński, 2014
8 Antennomeres III-XI yellow; ventral side dark green, moderately shiny; sulci on pronotum and intercostal areas green-bronze, dorsal side generally darker. Solomons: Santa Isabel Is. .... *P.* (*C.*) *isabellina* Kerremans, 1900
- Antennomeres III-XI brown; ventral side light green with golden reflections, strongly shiny; sulci on pronotum and intercostal areas light green, dorsal side generally greener. Solomons: Ranongga Is., Rendova Is. .... *P.* (*C.*) *gottwaldi* Frank, 2024

***Paracupta* (*Chalcotaenia*) *jana* sp. nov.**

(Figs. 1-7)

Type locality. Indonesia, Maluku Province, Seram Island, Saleman env. [Saleman ±2°57'24"S, 129°6'57"E].

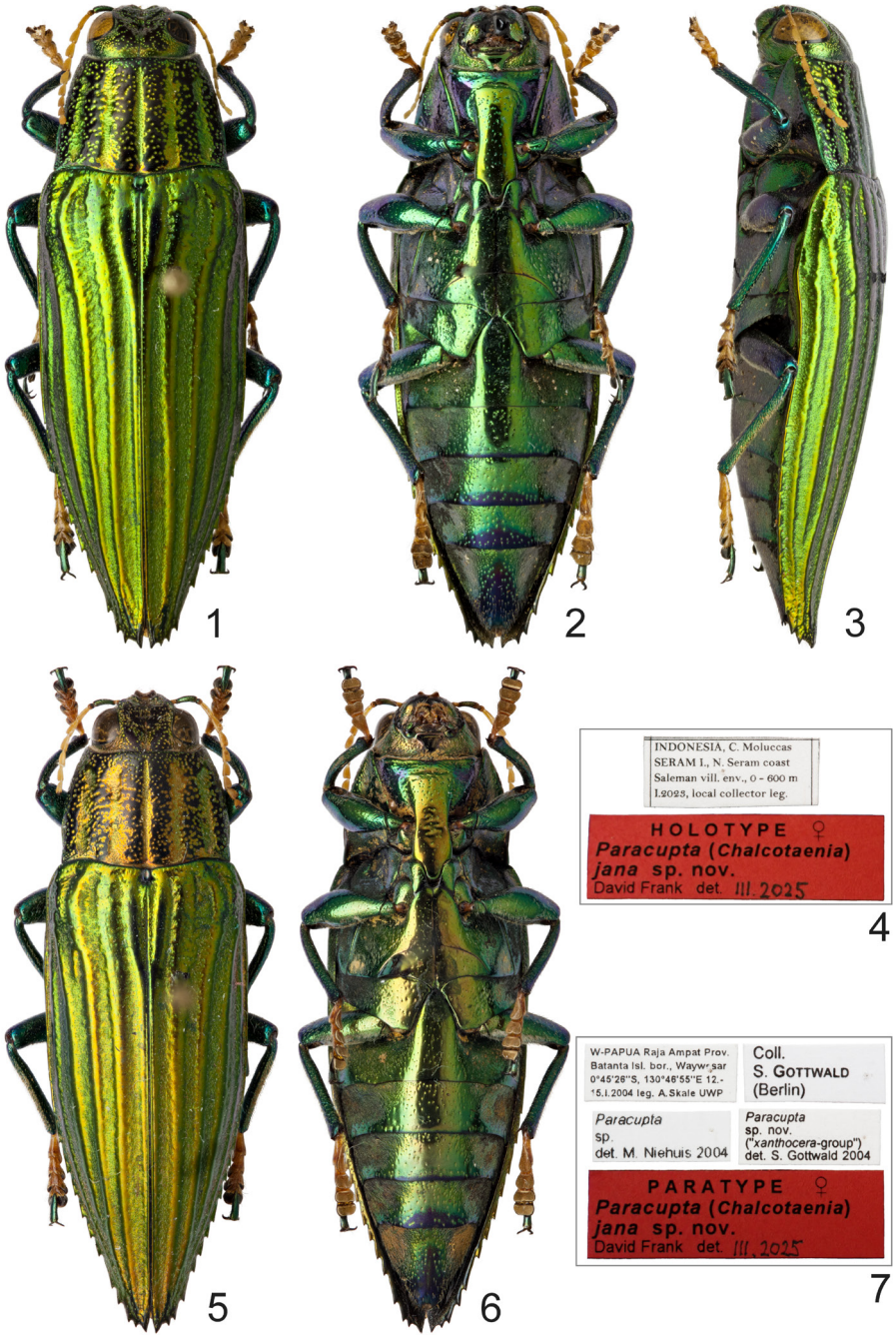
Type material examined. Holotype (♀): (29.50 × 9.50 mm; Figs. 1-4), 'INDONESIA, C. Moluccas | SERAM I., North Seram coast | Saleman vill. env., 0 - 600 m | I.2023, local collector leg. [w, p]' (DFPC). Paratype (1 ♀): INDONESIA: Southwest Papua Prov.: Wruwarez Island: (29.50 × 9.25 mm; Figs. 5-7), 'W-PAPUA Raja Ampat Prov. | Batanta Isl. bor., Waywesar | 0°45'26"S, 130°46'55"E 12.- | 15.I.2004 leg. A. Skale UWP [Urwald primär (primary rainforest)] [according to the coordinates and the name Waywesar the locality is on the northern coast of Wruwarez Is. which is ca 0.5 km N of Batanta Is.] [w, p] || Coll. | S. GOTTWALD | (Berlin) [w, p] || *Paracupta* | sp. | det. M. Niehuis 2004 [w, p] || *Paracupta* | sp. nov. | ("*xanthocera*-group") | det. S. Gottwald 2004 [w, p]' (SGBG). Both specimens were provided with an additional red printed label: 'HOLOTYPE [or PARATYPE respectively] ♀ | *Paracupta* (*Chalcotaenia*) | *jana* sp. nov. | David Frank det. III. 2025 [date handwritten]'.

Description of holotype. Preserved ♀ specimen, only last tarsomeres of both fore legs and last antennomere of right antenna are missing. Left middle leg was detached subsequently for extraction of DNA (the extraction was not successful). Length 29.50 mm, width 9.50 mm, length/width ratio: 3.11.

Body navicular, green with dark parts on head and pronotum. Four well developed costae on each elytron. Ventral side and legs green.

Head dark black-green with green or green-bronze reflections and macropunctures. Eyes large, oval. Frons 1.9× as wide as diameter of eye, impressed with deep medial sulcus, macropunctate, pubescent. Labrum brown, pubescent. Antennae serrate from antennomere IV. Antennomeres I (scape) green and metallic, II (pedicel) green at basal half and yellow-brown at distal half, macropunctate and pubescent, radicula (base of scape) yellow-brown, antennomeres from III yellow-brown, sparsely pubescent. Antennomere II ca. 3× shorter than III. Antennomeres IV–X trapezoidal, XI almost oval. Maxillae, labium, maxillary palpi and labial palpi brown, densely pubescent.

Pronotum trapezoidal, narrowing anteriad with moderately rounded sides, widest at base, 1.5× as wide as long. Anterior margin arcuate, lobe not protruding, densely pubescent. Elevated areas dark black-green with golden-green macropunctures, micropunctate. Five well developed longitudal sulci green, macropunctate. Lateral margin dark green with violet reflections, shiny. Basal margin bisinuate.



Figs. 1-7. 1-4: *Paracupta* (*Chalcotaenia*) *jana* sp. nov. (holotype, ♀ 29.50 mm); 5-7: *P.* (*C.*) *jana* sp. nov. (paratype, ♀ 29.50 mm): 1, 5- dorsal view; 2, 6- ventral view; 3- lateral view; 4, 7- labels.

8

9

Figs. 8-9. Surroundings of Saleman village (Indonesia, Maluku Prov., Seram Island), type locality of *Paracupta* (*Chalcotaenia*) *jana* sp. nov.

Scutellum small, almost quadrate, green, shiny.

Elytra slightly wider than pronotum at base, parallel at basal half, narrowing from mid-length to apex, moderately convex in lateral view. Lateral margins moderately arcuate below humeral calli, serrate at apical third. Green with golden reflections, apical part dark. Four distinctly elevated costae on each elytron, 1st costa parallel to suture, 2nd joined to 1st before apex. 3rd costa separated, slightly shortened but almost joined to 2nd. 4th costa also separated, slightly indicated before apex. Intercostal intervals very densely finely macropunctate, with sparse short pubescence. Epipleura horizontal, golden-green, dark at apex, macropunctate and pubescent more densely at basal half.

Legs green, metallic. Femora green, densely macropunctate and pubescent on inner side, sparsely on outer side. Tibiae, regularly macropunctate and pubescent, hind tibiae densely pubescent on outer side. Tibiae with two apical ventral spurs. Tarsomeres I-IV yellow-brown with black distal parts, ultimate tarsomere green metallic. Tarsi pubescent, tarsal claws divergent and simple.

Ventral side green with black-violet parts, metallic. Hypomeron irregularly macropunctate more coarsely than prosternum. Anterior margin of prosternum densely pubescent. Prosternal process biconcave-sided, arcuately narrowed at apex, approximately 2.7× as long as wide, sparsely macropunctate and with very sparse and short pubescence. Metasternum sparsely macropunctate at central part, densely and finely macropunctate with pubescence on sides. Abdominal ventrites I-V centrally sparsely macropunctate and shiny, laterally densely and finely macropunctate with short pubescence. Ventrite II with black-violet distal margin, black-violet stripe at distal part of ventrites reaches ca 1/3 on ventrite III, ca 1/2 on ventrite IV and covers almost entire ventrite V. Apical part with broad 'U' shaped notch.

Male. Unknown.

Variation. Body ♀♀ (n = 2) length: 29.50 mm, width: 9.25-9.50 mm, length/width ratio: 3.11-3.19. Both specimens are almost identical in size as well as in macropunctation, the specimen from Wruwarez Is. is more golden-bronze in colour.

Differential diagnosis. *Paracupta* (*C.*) *jana* can be easily distinguished from the other yellow tarsi taxa by having wide, rounded and (golden-)green elytral costae. Only *P.* (*C.*) *lamberti* has similar wide, rounded costae but it has only three pronotal sulci [*P.* (*C.*) *jana* five] and it is dark. For additional characters see Key to species.

Etymology. This species is dedicated to my wife Jana Franková, for her love and patience for thirty years. The epithet is noun in apposition.

Distribution. Indonesia, Seram Island (Maluku Province) and Wruwarez Island (Southwest Papua Province).

Remarks. I examined two specimens of the described species and although one is from Seram Is. and the second from Wruwarez Is. (the distance between these two islands is ca 300 km), they are almost identical and both specimens are included to the type series.

Local collector from Saleman village on Seram Is. (Figs. 8-9) knows this species from the locality where 'Kayu besi' is growing (Mr. Helmi pers. comm. X.2024). 'Kayu besi [ironwood]' is probably *Intsia bijuga* which is also known as 'Moluccan ironwood' but it is not certain whether it is also host plant of this species.

ACKNOWLEDGEMENTS. I would like to thank to Stephan Gottwald (Berlin, Germany) for the loan of the second specimen of the described species. Special thanks goes to Svatoslav Vrabec (Vrchlabí, Czech Republic, e-mail: vapno.sv@seznam.cz) for taking excellent photographs. My great thanks goes to my family, Jana, Dany and Sára, for their love, patience and support of my beetle studies, especially my wife Jana for her help with translations of English texts. Last but not least, I would like to thank the reviewer Eduard Jendek for his valuable comments and corrections.

REFERENCES

Bellamy C. L. 1985: A catalogue of the higher taxa of the family Buprestidae (Coleoptera). *Navorsinge van die Nasionale Museum Bloemfontein* 4: 405-472.

Bellamy C. L. 1986: The higher classification of Australian Buprestidae with the description of a new genus and species (Coleoptera). *Australian Journal of Zoology* 34: 583-600.

Bellamy C. L. 1998: Type species designations in the family Buprestidae (Coleoptera). *Deutsche Entomologische Zeitschrift* 45(1): 9-15.

Bellamy C. L. 2002: Volume 29.5. Coleoptera: Buprestoidea. In: Houston W. W. K. (ed.): *Zoological Catalogue of Australia*. Melbourne: CSIRO Publishing, Australia, xii + 492 pp., 4 color plates.

Bellamy C. L. 2003: An illustrated summary of the higher classification of the superfamily Buprestoidea (Coleoptera). *Folia Heyrovskyana,* Supplementum 10: 1-197 pp. + 44 pls.

Bellamy C. L. 2008: *A world catalogue and bibliography of the jewel beetles (Coleoptera: Buprestoidea). Volume 1: introduction; fossil taxa; Schizopodidae; Buprestidae: Julodinae-Chrysochroinae: Poecilonotini. Pensoft Series Faunistica No. 76*. Sofia-Moscow: Pensoft, 625 pp.

Carter H. J. 1921: Australian *Coleoptera*: notes and new species. *The Proceedings of the Linnaean Society of New South Wales* 46(3): 301-323.

Carter H. J. 1929: A check list of the Australian Buprestidae. [With Tables and Keys to Sub-families, Tribes, ami Genera, by Andre Thery, Correspondant de Muséum de Paris; and Figures (Plates xxxi. to xxxiii.) drawn by Cedric Deane, A.M.I.E. (Aust.)]. *The Australian Zoologist* 5(4): 265-304.

Deyrolle H. 1864: Description des Buprestides de la Malaisie recueillis par M. Wallace. *Annales de la Société Entomologique de Belgique* 8: 1-272, 4 pls.

Frank D. 2024: Revision of the subgenus *Chalcotaenia* of *Paracupta* (Coleoptera: Buprestidae: Chrysochroinae) and specification of *Buprestis xanthocera* Boisduval, 1835 as the type-species of the genus *Paracupta*. *Zootaxa* 5555(4): 535-568. https://doi.org/10.11646/zootaxa.5555.4.3

Gemminger M. & Harold E. von 1869: *Catalogus coleopterorum hucusque descriptorum synonymicus et systematicus. Tomus 5. Buprestidae, Trixagidae, Monommidae, Eucnemidae, Elateridae, Cebrionidae.* Monachii: E.H. Gummi, 262 pp. [pp. 1347-1608] https://doi.org/10.5962/bhl.title.9089

Heyne A. & Taschenberg O. 1908: *Die exotischen Käfer in Wort und Bild*. G. Reusche, Leipzig, 262 pp.

Hołyński R. B. 1993: A reassessment of the internal classification of the Buprestidae Leach (Coleoptera). *Crystal - Publications of the Natural Science Foundation at Göd*, *Series Zoologica* 1: 1-42.

Hołyński R. B. 1997: Mroczkowskia-knot and the evolution of the subtribe Chrysochroina (Coleoptera: Buprestidae). *Annales Zoologici* 47: 179-188

Hołyński R. B. 2009: *Taxonomic structure of the subtribe Chrysochroina Cast. with review of the genus Chrysochroa Dej.* Warszawa: Gondwana Sp. z o. o., 391 pp., 20 color pls + unpaginated index.

Hołyński R. B. 2014: Description of three new subgenera and two new species of *Paracupta* Deyr. (Coleoptera: Buprestidae). *Genus* 25(3): 403-414.

Kerremans C. 1892: Catalogue synonymique des Buprestides decrits de 1758 à 1890. *Mémoires de la Société Entomologique de Belgique* 1: 1-304.
Kerremans C. 1893: Essai de groupement des Buprestides. *Annales de la Société Entomologique de Belgique* 37: 94-122, 3 figures.
Kerremans C. 1903: Coleoptera Serricornia. Fam. Buprestidae. In: Wytsman P. (ed.): *Genera Insectorum. Fasc. 12b.* Bruxelles: Verteneuil & Desmet, pp. 49-112.
Kerremans C. 1909: *Monographie des Buprestides. Tome IV. Chalcophorini: Chalcophorites (fin)* [livraisons 1-5]. Bruxelles: J. Janssens, pp. 1-160 + pls. 23-26. https://doi.org/10.5962/bhl.title.9700
Matthews E. G. 1985: *A guide to the genera of beetles of South Australia, Part 4 Polyphaga: Byrrhoidea, Buprestoidea. Dyropoidea. Elatcroidea, Cantharoidea, Derodontoidca, and Bostrichoidea.* South Australian Museum, Special Educational Bulletin Series 7, 68 pp.
Obenberger J. 1926: Buprestidae I. In: Schenkling S. (ed.): *Coleopterorum Catalogus*, *Pars 84*. Berlin: W. Junk, 212 pp.
Saunders E. 1871: *Catalogus Buprestidarum Synonymicus et Systematicus*. London: J. Janson, 171 pp.
Théry A. 1926: Recherches synonymiques sur les Buprestides et descriptions d'espèces nouvelles. *Bulletin et Annales de la Société Entomologique de Belgique* 66(1-2): 33-74.
Volkovitsh M. G. 2001: The comparative morphology of antennal structures in Buprestidae (Coleoptera): evolutionary trends, taxonomic and phylogenetic implications. Part 1. *Acta Musei Moraviae, Scientiae Biologicae* 86: 43-169.
Williams G., Mitchell K. & Sundholm A. M. 2024: *Australian Jewel Beetles: An Introduction to the Buprestidae*. Melbourne: CSIRO Publishing, vi + 215 pp.

Received: 2.5.2025
Accepted: 10.6.2025
Printed: 5.10.2025