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SOME OTARIONIDAE (TRILOBITA) FROM THE LOWER CARBONIFEROUS OF EUROPE

Abstract. — Three Lower Carboniferous representatives of the family Otarionidae: *Coignouina acanthina* (Coignou, 1890), *Namuropyge discors discors* (M'Coy, 1844), *N. discors kingi* R. & E. Richter, 1939 are here redescribed and figured. Their systematic position and the constitution of the family Otarionidae are discussed. Reconstructions of *Coignouina acanthina* and *Namuropyge discors discors* are given.

INTRODUCTION

During field-work at Gałęzice in the Holy Cross Mountains (Góry Świętokrzyskie), Poland, in 1962, the present author found the cephalon of a small otarionid trilobite *Coignouina acanthina* (Coignou, 1890) in the Visean Limestone of Besówka Hill. A second, well-preserved specimen from Ostrówka Hill (Gałęzice) was kindly given to the writer by Dr. St. Czarniecki (Laboratory of Geology, Polish Academy of Sciences, Kraków).

Coignouina acanthina was known, so far, only from the type specimen, from the Pendleside Limestone, Cracoe, Yorkshire, Great Britain. The excellent state of preservation of the two cephala found in Poland, permitting the observation of some new morphological details, calls for the redescription of the species.

During her stay, as scholarship of the Polish Academy of Sciences, in Great Britain, the Irish Republic and Belgium, the present writer had the opportunity to examine — in addition to the type specimen of *C. acanthina* — other Carboniferous otarionid genus: *Namuropyge* R. & E. Richter, 1939, which up to now was not satisfactorily figured. The representatives of this genus are also redescribed and illustrated in the present paper.

The present study was made possible by the kindness of the Sedgwick Museum, Cambridge, and the British Museum (Natural History), London, in loaning the original specimens.

The photographs were taken by Miss M. Czarnocka, and the drawings

and pictures of reconstructed specimens were made by Mrs. K. Budzyńska (Palaeozoological Institute, Polish Academy of Sciences).

To all the persons and institutions above mentioned the present author expresses her deep gratitude.

The abbreviations used in the present paper are:

Z. Pal. = Palaeozoological Institute, Polish Academy of Sciences, Warszawa,
SMC = Sedgwick Museum, Cambridge,
BM = British Museum (Natural History), London.

DESCRIPTIONS

Family **Otarionidae** R. & E. Richter, 1926

Diagnosis: See R. & E. Richter and Schmidt (1959).

The genera assigned: *Otarion* Zenker, 1833; *Cyphaspides* Novák, 1890; *Namuropyge* R. & E. Richter, 1939; *Coignouina* Reed, 1943.

Remarks. — In 1947, Přibyl established within the familly Otarionidae the new subfamily Cyphaspidinae (Cyphaspidedinae Prantl & Přibyl, 1950), to which he assigned *Cyphaspis* Novák and tentatively also *Brachymetopus* M'Coy, 1847 and *Cheiropyge* Diener, 1897. Prantl and Přibyl (1950) placed these two latter genera in the Brachymetopinae Prantl & Přibyl, the Cyphaspidinae remaining monotypic. Their opinion was partly accepted by R. & E. Richter and Schmidt (1959), who recognized within the family Otarionidae two subfamilies: Otarioninae R. & E. Richter, 1926 with the genera *Otarion, Coignouina* and *Tschernyschewiella* Toll, 1899, and Cyphaspidinae with the genus *Cyphaspides*. The genus *Namuropyge* was tentatively assigned by Schmidt (1959) to the Brachymetopidae Prantl & Přibyl, 1950.

In the opinion of the present author, based on the examination of the collections of Lower Carboniferous otarionids from Europe, the genera *Cyphaspides, Namuropyge, Otarion* and *Coignouina* are closely related and should together be assigned to the Otarionidae. The recognition of subfamilies within Otarionidae seems unnecessary. With regard to the systematic position of *Tschernyschewiella,* the present writer supports Erben's opinion (1966) that this genus should remain apart from the Otarionidae.

Přibyl (1946, 1947) and Prantl & Přibyl (1950) considered *Coignouina* as a subgenus of the genus *Otarion*, a view which was not supported by R. & E. Richter and Schmidt (1959). The present author is of the opinion that *Coignouina* is an independent genus, as close to *Otarion* as it is

to *Cyphaspides*. Moreover, in some respects, it is intermediate morphologically between these genera (p. 164).

In the known species of *Otarion*, specialization tends towards the attainment of the most convex, nearly globular (while enrolled) form possible. On the contrary, in other representatives of Otarionidae a tendency towards enlargement of the body area prevails. It is visible in the presence of more or less horizontally arranged spines along the margins of cephala or pygidia of *Coignouina, Cyphaspides* and *Namuropyge*. It seems probable that having different adaptative characters, the representatives of *Otarion* also differed in their habits from other otarionids.

Coignouina is the only genus within the Otarionidae, reported from both the Devonian and the Lower Carboniferous. *Namuropyge* is known only from the Lower Carboniferous. The remaining genera are so far known no higher than the Middle Devonian. The lack of *Coignouina* in the Uppermost Devonian can be easily explained by the extreme rarity of this genus.

Genus *Coignouina* Reed, 1943

Type species: Cyphaspis acanthina Coignou, 1890.
The genus is known only from the cephala.

Synonyms:
1852. *Cyphaspis*; J. Barrande, Système silurien..., p. 490.
1872. *Cyphaspis*; J. Barrande, *Ibid.*, p. 21.
1890. *Cyphaspis*; M. Coignou, On a new species..., p. 421.
1935. *Otarion*; J. S. Williams, *in*: G. A. Cooper & J. S. Williams, Tully Formation..., p. 853.

Stratigraphic and geographic range. — Lower Devonian-Middle Devonian of Central Bohemia; ?Germany; lower part of Upper Devonian (Tully Formation) of North America; Lower Carboniferous (Visean) of Great Britain; Poland.

Species assigned: *C. acanthina* (Coignou, 1890), *C. davidsoni* (Barrande, 1852), *C. coronata* (Barrande, 1872), *C. spinafrons* (Williams, 1935).

Diagnosis. — See R. & E. Richter and Schmidt (1959).

Remarks. — In 1890, Coignou described a very peculiar cephalon as "*Cyphaspis acanthina*" from the Pendleside Limestone of Cracoe, Yorkshire, Great Britain. Reed (1943) proposed for this form, distinguished from the other otarionids by its spine-bearing border, a new subgeneric name: *Coignouina*, which he classified within the genus *Brachymetopus*. However, in 1946 Přibyl indicated the close relationship between the form mentioned and the genus *Otarion*, accordingly considering it to be a subgenus of *Otarion*. He assigned to this subgenus the following species:

"*Cyphaspis*" *davidsoni* Barrande, 1852, "*C.*" *coronata* Barrande, 1872, and tentatively "*C.*" *cerberus* Barrande, 1846 and "*C.*" *truncatus* Roemer, 1855. Later (1947) Přibyl assigned to *Otarion* (*Coignouina*) — "*Otarion*" *spinafrons* Williams — the North American species from the Tully Formation, excluding at the same time from *Coignouina* — "*Cyphaspis*" *cerberus* and "*C.*" *truncatus*. He classified these latter species within the genus *Cyphaspides* Novák.

As the recently found, well-preserved cephala of *Coignouina acanthina* show, this genus is strikingly similar to *Cyphaspides*. For instance, *Cyphaspides comatus* (Barrande, 1872) has an identical structure of the cephalic border, which is provided with marginal (nearly horizontal) and vertical spines. Further similarities are seen in the shape and vaulting of the glabella. In *Coignouina*, there was never found any true eye-ridge, the diagnostic feature of the *Cyphaspides*. However, in the Polish specimen of *C. acanthina* (Pl. I, Fig. 3), the anterior edge of the eye-platform is distinctly marked and runs perpendicularly to the frontal lobe of glabella, giving the impression that a kind of "eye-ridge" structure is present.

Cyphaspides differs from *Coignouina* in having a very narrow (*sag.*) preglabellar field, while in *Coignouina* this is always comparatively wide. In spite of the differences, *Coignouina* seems to be very close to *Cyphaspides*, as well as to *Otarion*.

Coignouina acanthina (Coignou, 1890)
(Pl. I, Figs. 3-5; Pl. II, Fig. 1; Text-pl. I, Figs. 1 a-b, 2 a-b)

1890. *Cyphaspis acanthina* Coignou; Coignou, On a new species..., p. 421, Text-fig. 5.
1943. *Coignouina acanthina* (Coignou); F. R. Reed, The genera..., p. 64.

Holotype: Cephalon, SMC No. E-3394; Pl. I, Fig. 4.
Type horizon: Pendleside Limestone, Visean, Carboniferous.
Type locality: Cracoe, Yorkshire, Great Britain.

Diagnosis. — Lateral and anterior margin of cephalon with a row of slender, pointed spines, slightly declined downwards from the horizontal plane; second row of 12 massive spines arranged along border, on its dorsal surface, and directed upwards; a single spine on each half of posterior border; genal spines long, bifurcate; exoskeleton finely granulated.

Material. — One damaged cephalon (holotype) from light-grey Pendleside Limestone of Cracoe, Great Britain; one well preserved cephalon from dark-grey limestone of Ostrówka Hill (Z. Pal. Tr II/78) and one cephalon from light-grey limestone of Besówka Hill (Z. Pal. Tr II/80), both latter from Visean, Gałęzice, Holy Cross Mountains, Poland.

Dimensions (in mm):

	SMC E-3394	Z. Pal. Tr. II/78	Z. Pal. Tr. II/80
Length of cephalon	3.5	2.5	3.4
Width of cephalon	5.0	4.0	4.8
Length of glabella	2.0	1.8	2.0
Width of glabella	2.0	1.4	1.5

Description. — Cephalon semicircular, surrounded by distinct, convex border. Along outer margin of border, a row of about 24 thin, pointed spines slightly declined from the horizontal plane. On dorsal surface of border, bases of 12 broken-off spines visible; they were probably strong, tubular and bent backwards. On each half of posterior border, a trace of single, broken-off spine present. Border furrow shallow, broad. Preglabellar field comparatively narrow (*sag.*); glabella swollen, with drop-like, distinctly detached basal lobes; fronto-median lobe of glabella subquadrate, with bases of 3 tubular, broken-off spines; a pair of those spines situated at front of glabella, the third — centrally. Occipital ring convex, narrow (*sag.*). Genae strongly vaulted; facial suture opisthoparian, hardly visible; most probably eyes small, but not preserved; eye-platform elevated above rest of gena; anterior edge of this platform distinctly marked as line running perpendicularly to anterior lobe of glabella. Genal spine very long, cylindrical, bifurcating at the base; its preserved length equal to frontal width of glabella.

In longitudinal section, glabella strongly swollen, frontally vaulted above sloping preglabellar field; anterior border slightly upturned; marginal spines somewhat declined downwards from horizontal plane.

In transverse section, glabella narrow and extremely strongly bowed; fixigenae flat, librigenae steeply sloping towards horizontally situated lateral border; eye-platform elevated above genae.

Ornamentation consists of small, sparse tubercles. In posterior part of glabella, along its middle line, two more prominent tubercles present.

Cephalic doublure narrow, flat. Hypostoma, thorax and pygidium unknown.

Remarks. — The Polish specimens of *C. acanthina* differ from the holotype in having a longer glabella and somewhat thinner marginal spines. The protuberances described above, present on the border along its dorsal surface, cannot be seen on holotype specimen, because this latter has no exoskeleton preserved on this part of cephalon.

The reconstruction of the cephalon of *Coignouina acanthina*, given in the present paper, is based on all three known specimens (Pl. II, Fig. 1). There can be seen three spinal outgrowths on the surface of glabella. Such spines occur in the representatives of several families, i.e. in Odontopleuridae, Lichidae a. o., where they are usually bent backwards. They

TEXT-PLATE I

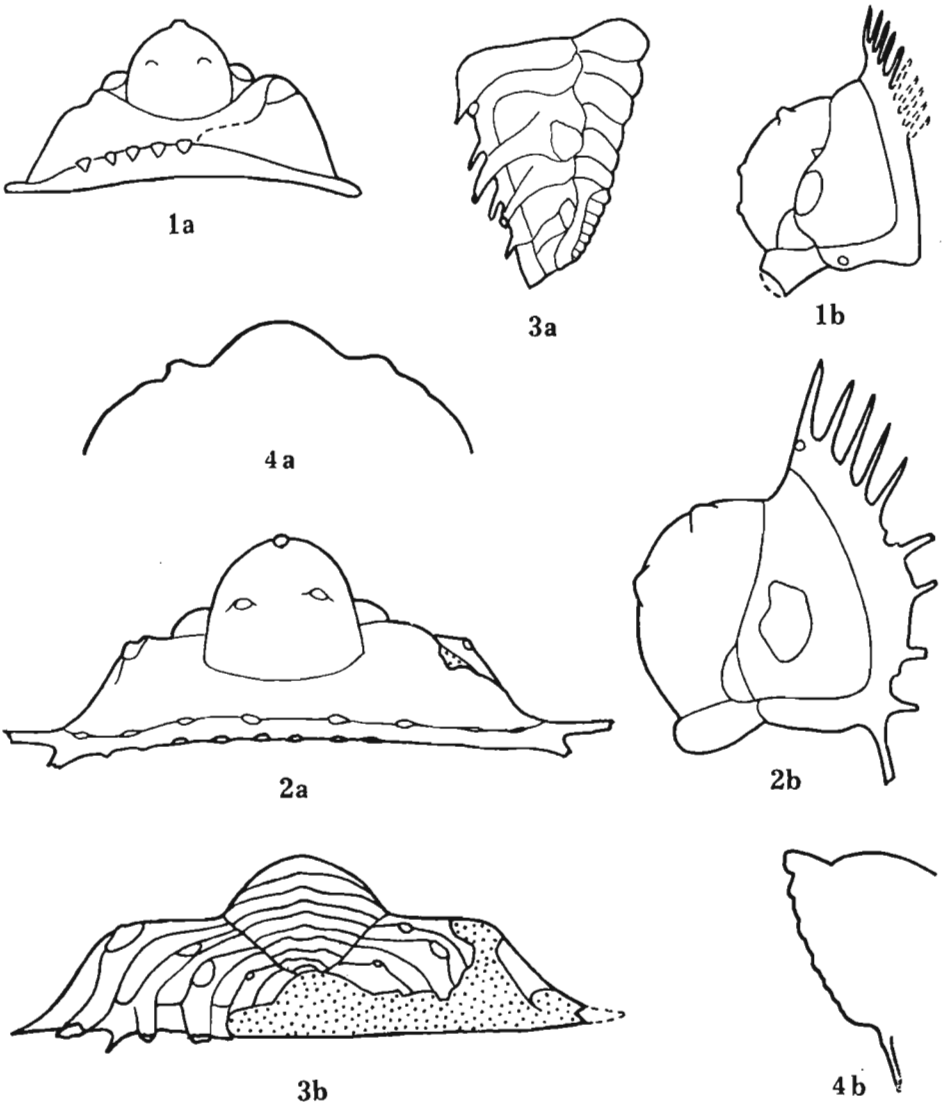

Fig. 1. *Coignouina acanthina* (Coignou), holotype cephalon, SMC E-3394: *a* transverse view, *b* longitudinal view; ×14.

Fig. 2. *Coignouina acanthina* (Coignou), cephalon, Z. Pal. Tr. II/78: *a* transverse view, *b* longitudinal view; ×26.

Fig. 3. *Namuropyge discors discors* (M'Coy), pygidium BM I-15489: *a* transverse view, *b* longitudinal view; ×20.

Fig. 4. *Namuropyge discors kingi* R. & E. Richter, holotype, pygidium, SMC E-3694: *a* transverse section, *b* longitudinal section; ×13.

are shown in this manner in the reconstruction given. However, there was not any evidence in the fossil material of *Coignouina*, concerning the length of these spines. To knowledge of the present author, the vertical spines — the bases of which were found on the surface of the cephalic border of *C. acanthina* — were never recorded in other trilobites. Thus, both their length and the direction accepted in the reconstruction are hypothetical. It seems likely, however, that they should be also bent backwards as in the case of those found on the glabella.

By comparison with the other representatives of the genus, *C. acanthina* differs firstly in the presence of the spines situated on the surface of the border, and secondly in having long, bifurcated genal spines, which are directed more outwardly than those in other species.

Genus *Namuropyge* R. & E. Richter, 1939

Type species: *Namuropyge demaneti* R. & E. Richter, 1939.

The genus is known only from the pygidia.

Synonyms:

1844. *Phillipsia*; F. M'Coy, Synopsis..., p. 161.
1847. *Brachymetopus*; F. M'Coy, On the fossil botany..., p. 230.
1884. *Brachymetopus*; H. Woodward, A monograph..., p. 54.
1924. Settle pygidium; W. B. R. King, Rare trilobites..., p. 361.

Stratigraphic and geographic range. — Lower Carboniferous (Visean — Namurian) of Belgium, Great Britain, Eire.

Species and subspecies assigned: *N. demaneti* R. & E. Richter, 1939; *N. discors discors* (M'Coy, 1844); *N. discors kingi* R. & E. Richter, 1939.

Diagnosis. — Pygidium very small, with ?9 to 15 axial rings and 5 segments on pleural lobes. No ribs differentiated. Posterior bands of pleural segments thickened and at least one of them prolonged into spine.

Remarks. — The genus *Namuropyge* was assigned to the Otarionidae by R. and E. Richter (1939). Besides the type species, they included here also the pygidium "*Namuropyge? kingi*" R. & E. Richter, 1939 — the specimen described for the first time by King (1924), who did not name it.

In R. and E. Richter's opinion (1939), "*N.? kingi*" could only tentatively be assigned to this genus, and probably belongs to another genus. However, both forms mentioned and also "*Brachymetopus discors*" are essentially similar. They have very similar structures of the pleural field, without the development of ribs, and with thick, posterior bands of segments, very well pronounced and prolonged into spines beyond the margin of the pygidium. In *N. demaneti* only one, very long spine occurs in the prolongation of the posterior band of the fourth segment. The number of axial rings is also smaller in this last-mentioned species.

However, it should be stated that *N. demaneti* is known only from the damaged negative of the pygidium and its plasticine cast, thus, the

number of spines and that of axial rings (which are always very indistinct near the tip of axis), could be easily mistaken. The pygidia of all known representatives of the *Namuropyge* are very similar to those of *Cyphaspides* Novák, 1890, assigned in the present paper to the family Otarionidae (p. 162).

Generally, the discrepancy between the number of axial rings and pleural segments (the latter being usually much smaller) is characteristic for both genera. However, their most important, common character is the lack of differentiated articulating half-ribs. This latter is caused by the presence of primary segments, which are not re-arranged on the pleural lobes in order to produce the rib-structure. Moreover, the same tendency for stronger development of the posterior segmental bands, which protrude as spines, is present in both *Namuropyge* and *Cyphaspides*.

In conclusion, the present author is of the opinion that, in fact, *Namuropyge* is very close to *Cyphaspides*.

Both, King (1924) and R. & E. Richter (1939) discussed the possibility that the pygidium named "*Brachymetopus discors*" could correspond with the cephalon *Coignouina acanthina*. In their opinion, however, these forms are not conspecific, and perhaps belong to closely related genera (R. & E. Richter, 1939, p. 12). On the contrary, in the opinion of the present writer, they could be representatives of the same genus, are even the same species.

The fact that *Namuropyge* has a pygidial structure similar to that of *Cyphaspides*, which, on the other hand, shows the close resemblance in cephala of its representatives to the cephala of *Coignouina*, makes such a conclusion very probable. Nevertheless, the author agrees with the previous workers that, for the time being, these forms should be treated separately, until new unequivocal evidence is found.

Namuropyge discors discors (M'Coy, 1844)
(Pl. I, Fig. 1; Pl. II, Fig. 2; Text-pl. I, Fig. 3 a-b)

1844. *Phillipsia(?) discors* M'Coy; F. M'Coy, Synopsis..., p. 161, Pl. 4, Fig. 7.
1847. *Brachymetopus discors* M'Coy; F. M'Coy, On the fossil botany..., p. 230.
1884. *Brachymetopus discors* M'Coy; H. Woodward, A monograph..., p. 54, Pl. 8, Fig. 15.

Holotype: Pygidium illustrated by M'Coy (1844, Pl. 4, Fig. 7).
Type horizon: Carboniferous Limestone (Visean?).
Type locality: Millicent Clane, Kildare, Eire.

Diagnosis. — Pygidium broad and short (length to width ratio 0.6), with spines along margin; axis with 13 distinct rings; articulating half-ring very broad (*sag.*); 5 segments on pleural lobes, posterior bands of segments broad (*exsag.*) and convex.

Material. — One pygidium, BM No. I-15489, from Carboniferous Lime-

stone of Little Island, Cork, Eire. Specimen illustrated by Woodward (1884, Pl. 8, Fig. 15).

Dimensions (in mm):

	BM I-15489
Length of pygidium	2.2
Width of pygidium	4.5
Length of axis	1.8
Width of axis	1.7

Description. — Pygidium broad; axis conical, slightly narrower than pleural lobes, with 13 convex rings separated by deeply cut ring-furrows; articulating half-ring convex and very broad medially (*sag.*); pleural lobes with 5 segments, posterior bands of which are broad (*exsag.*), convex and prolonged beyond border into marginal spines. Anterior bands of segments narrower, merging with pleural and interpleural furrows towards border, where deepened, forming pits. On the margin, opposite anterior bands of segments (except first one), thin and short spines present. No articulating half-rib differentiated. In longitudinal section, axis straight, somewhat sloping, with distinctly delimited apex and first four rings prominent. In transverse section, axis low and broad, axial furrows shallow, broad; pleural lobes vaulted.

Ornamentation. — Axis covered with small tubercles. Each second ring, beginning with second one, bears in the middle a tubercle slightly higher than the others. A longitudinal row of more conspicuous tubercles present also along axial furrow. On pleural lobes, bases of some elevated structures preserved, which probably were strong, posteriorly directed spines. They are situated on the posterior bands of segments only, those on first, third and fifth segments positioned nearer axial furrows, others, much larger, on the alternating segments, at the border.

Remarks. — The present author has not seen the holotype, unsatisfactorily illustrated by M'Coy (1844). However, the detailed description given by that author seems to indicate that the specimen from Little Island is conspecific with that from Millicent Clane.

The specimens of *Namuropyge discors discors* (M'Coy, 1844), being the subject of present description, was illustrated before by Woodward (1884, Pl. 8, Fig. 15). This author did not give any new description of it, but quoted that of M'Coy (1844).

There exists a strong resemblance between the Irish specimens and the type species — *Namuropyge demaneti* R. & E. Richter, 1939 — from the Namurian of Bioul, Belgium. Both have the same general shape, a conical axis and thickened posterior bands of segments on the pleural lobes. *N. demaneti* has, however, fewer axial rings (9) and does not have marginal spines, except for a very long one on the fourth segment. But, as stated above (p. 167), the state of preservation of the Belgian specimen

does not exclude the possibility that also the more anterior segments were prolonged into spines.

A reconstruction of *N. discors discors* is given here (Pl. II, Fig. 2). It is based on the specimen described above, but the posterior part of pygidium, which is damaged, was completed according to the well-preserved part of the holotype of *N. discors kingi* R. & E. Richter, 1939 (see below). Judging from the presence of many common characters in both subspecies, the author believes that they could be also similar in that part of pygidium. The short marginal spines in the prolongation of the anterior bands of segments are preserved entirely on the reconstructed specimen, but those in the prolongation of the posterior bands are broken off. Their bases show that they were thicker and tubular. Most probably, they were also much longer than the others (such a long spine is present in *N. demaneti*). As to the outgrowths situated on the surface of pygidium, only the broad bases of broken-off structures are present. The orientation of the fracture plane seems to indicate that they were directed backwards and somewhat outwards. Their length on the reconstruction given is hypothetical.

Namuropyge discors kingi R. & E. Richter, 1939
(Pl. I, Fig. 2; Text-pl. I, Fig. 4 a-b)

1924. Settle pygidium; W. B. King, Rare trilobites..., p. 361, Fig. 1.
1939. *Namuropyge? kingi* R. & E. Richter; R. & E. Richter, Ueber *Namuropyge...*, p. 10, Pl. 1, Fig. 2.

Holotype: Pygidium SMC No. E-3694; Pl. I, Fig. 2.
For the *horizon* and *locality* — see R. & E. Richter, 1939, p. 10.

Diagnosis. — Pygidium nearly semicircular (length to width ratio 0.5), with 15 axial rings; segments on pleural lobes directed obliquely backwards; marginal spines, prolonging posterior bands of segments, strong.

Material. — Only the holotype-specimen SMC No. E-3694 known.

Dimensions (in mm):

	SMC E-3694
Length of pygidium	3.3
Width of pygidium	5.0
Length of axis	3.0
Width of axis	1.8

Remarks. — The detailed diagnosis of this form, quoted by R. and E. Richter (1939), after King (1924), is quite satisfactory. Both, King and R. & E. Richter, dealt with an undeveloped specimen, thus some its character were obscure. After removing the matrix, the present author observed that the posterior convex bands of segments are prolonged beyond the border into spines, the shorter and thinner spines being also

present on the margin, opposite the anterior bands of segments. This possibility was already admitted by R. and E. Richter (1939). There exists a very close resemblance between the specimen considered here and *N. discors discors*. It can be seen in the mutual relations of the marginal spines, connected with either the posterior or anterior band of segments, the first mentioned being thicker than the others, and in the similar distribution of the spines on the surface of pygidium. Differences, such as the more semicircular shape, the greater number of axial rings, the pleural band more obliquely directed backwards and the less regular granulation of axis in the Settle pygidium, are of subspecific value.

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OTARIONIDAE (TRILOBITA) KARBOŃSKIE EUROPY

Streszczenie

Praca poświęcona jest rewizji karbońskich przedstawicieli rodziny Otarionidae R. & E. Richter, 1926. Zostały opisane ponownie *Coignouina acanthina* (Coignou, 1890), *Namuropyge discors discors* (M'Coy, 1844) i *Namuropyge discors kingi* R. & E. Richter, 1939.

Te rzadko występujące drobne formy były dotychczas znane z niedokładnych opisów i niedostatecznie zilustrowanych materiałów angielskich, irlandzkich i belgijskich. Znalezienie w Polsce, w wapieniach wizenu Gałęzic (Góry Świętokrzyskie), dwóch doskonale zachowanych cefalonów *Coignouina acanthina* pozwoliło na uzupełnienie wiadomości o morfologii tego gatunku i wykonanie jego rekonstrukcji. Autorka w czasie swego pobytu w W. Brytanii, Irlandii i Belgii miała możność zapoznać się z oryginalnymi okazami omawianych form i zrewidować ich stanowisko systematyczne. W wyniku tych badań uznała ona, że rodzaj *Namuropyge*, oparty na znajomości pygidium i zaliczany dotychczas do Brachymetopidae Prantl & Přibyl, 1950, wykazuje uderzające podobieństwo do rodzaju *Cyphaspides* Novák 1890 (Otarionidae). Również rodzaj *Coignouina*, którego opisano wyłącznie cefalony, wykazuje szereg podobieństw z rodzajem *Cyphaspides*, a także z rodzajem *Otarion* Zenker, 1833. W konkluzji, wymienione rodzaje powinny być zaliczone do tej samej rodziny — Otarionidae. Wydzielanie w obrębie Otarionidae odrębnych podrodzin Otarioninae i Cyphaspidinae (R. & E. Richter & Schmidt, 1959) nie jest uzasadnione, gdyż przedstawiciele *Coignouina* i *Namuropyge* zajmują stanowisko pośrednie między rodzajami *Otarion* a *Cyphaspides*.

ГАЛЬШКА ОСМУЛЬСКА

КАМЕННОУГОЛЬНЫЕ OTARIONIDAE (TRILOBITA) ЕВРОПЫ

Резюме

Настоящая работа посвящена ревизии каменноугольных представителей семейства Otarionidae R. & E. Richter, 1926. Описано вновь *Coignouina acanthina* (Coignou, 1890), *Namuropyge discors discors* (M'Coy, 1844) и *Namuropyge discors kingi* R. & E. Richter, 1939.

Эти редко выступающие мелкие формы до сих пор были известны из неточных описаний и недостаточно иллюстрированных материалов английских, ирландских и бельгийских. Находка в Польше, в визейских известняках Галэнзиц (Свентокржиские Горы), двух прекрасной сохранности цефалонов *Coignouina acanthina* разрешила дополнить сведения о морфологии этого вида и изготовить его реконструкцию. Автор во время своего пребывания в Великобритании, Ирландии и Бельгии имел возможность ознакомиться с оригинальными образцами обсуждаемых форм и провести ревизию их систематического положения. В результате этих изучений, автор принял, что род *Namuropyge*, основан на знакомстве пигидиума и причисляемый до сих пор к Brachymetopidae Prantl & Přibyl, 1950, обнаруживает поразительное сходство с родом *Cyphaspides* Novák, 1890 (Otarionidae). Род *Coignouina*, которого только цефалоны были описаны, тоже имеет ряд сходств с родом *Cyphaspides*, а также с родом *Otarion* Zenker, 1833. В заключении, все указанные роды должны быть причислены к одному семейству — Otarionidae. Выделение в пределах Otarionidae особых подсемейств Otarioninae и Cyphaspidinae (R. & E. Richter & Schmidt, 1959) не обосновано, так как представители *Coignouina* и *Namuropyge* занимают промежуточную позицию между родами *Otarion* и *Cyphaspides*.

PLATES

Plate I

Fig. 1. *Namuropyge discors discors* (M'Coy), pygidium BM I-15489; Lower Carboniferous (Visean?), Millicen Clane, Kildare, Eire; ×11.

Fig. 2. *Namuropyge discors kingi* R. & E. Richter, pygidium SMC E-3694; Lower Carboniferous, Visean, Settle, Yorkshire, Great Britain; ×9.4.

Coignouina acanthina (Coignou)

Fig. 3. Cephalon, Z. Pal. Tr. II/78; Lower Carboniferous, Visean, Ostrówka Hill, Gałęzice, Holy Cross Mountains, Poland; ×12.5.

Fig. 4. Cephalon, holotype, SMC E-3394; Lower Carboniferous, Visean, Cracoe, Yorkshire, Great Britain; ×8.5. Retouched.

Fig. 5. Cephalon, Z. Pal. Tr. II/80; Lower Carboniferous, Visean, Besówka Hill, Gałęzice, Holy Cross Mountains, Poland; ×9.

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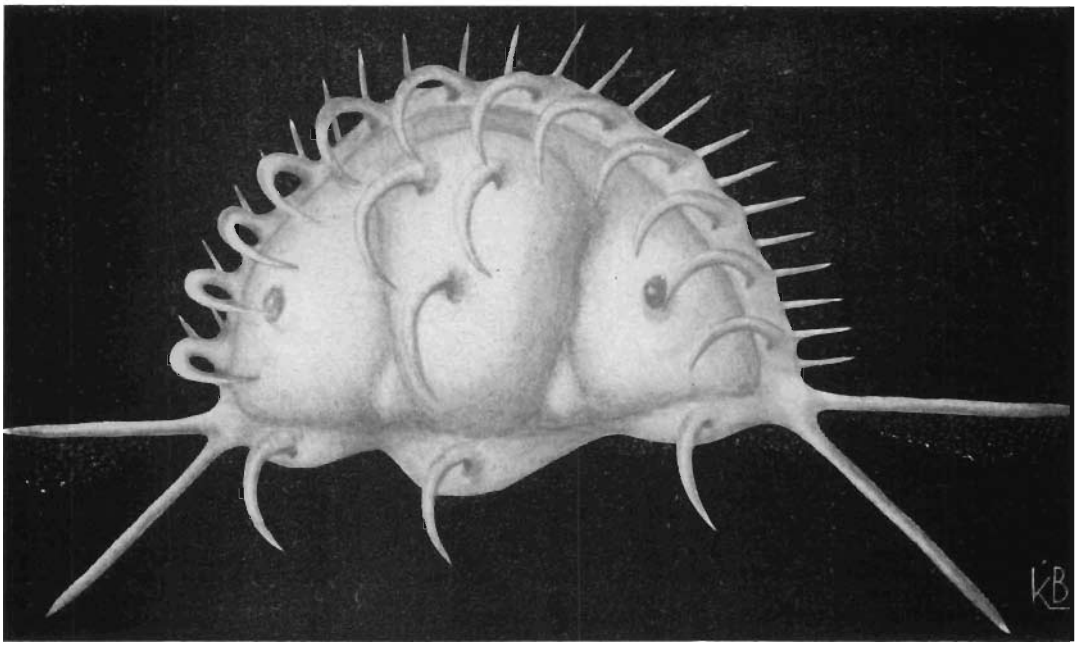

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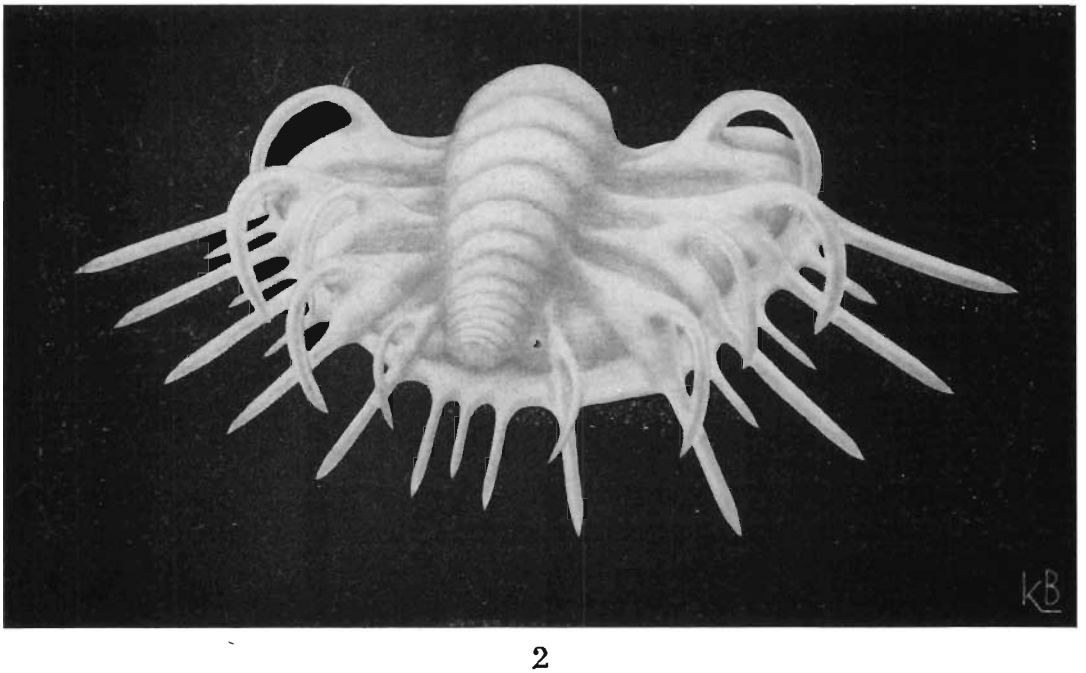

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Plate II

Fig. 1. *Coignouina acanthina* (Coignou), reconstruction of cephalon (after the specimen. Z. Pal. Tr. II/78), ornamentation omitted; ×22.

Fig. 2. *Namuropyge discors discors* (M'Coy), reconstruction of pygidium (after the specimen BM I-15489), ornamentation omitted; ×21.