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A Guide to the Collection of Julius Pia. 1st Part: "Neue Studien über triadische Siphonae verticilatae" Julius v. Pia, 1912

Ein Führer zur Sammlung von Julius Pia. Teil 1: „Neue Studien über triadische Siphonae verticilatae" Julius v. Pia, 1912

by

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Abstract

This work is the first published part of a guide with comments which can help algal researchers work with the thinsection collection of Julius Pia located at the Museum of Natural History in Vienna.

Zusammenfassung

Die hier vorliegende Arbeit ist der erste publizierte Teil eines kommentierten Führers, erstellt aus den Unterlagen Pias, um mit der am Naturhistorischen Museum in Wien aufbewahrten Dünnschliffsammlung effizient arbeiten zu können.

1. Introduction

The aim is to correlate every pictured and descriped alga in PIA (1912) "Neue Studien über triadische Siphonae verticilatae" with the appropriate thinsection. Additionaly, the authors include a list of rock samples, mostly still available; the algal classification therein was determined by Pia.

The basis of this work is a handwritten text ("Katalog der Diploporensammlung"), from the Museum of Natural History at Vienna, in which Pia wrote in numerical order all rock samples with their locality. In this text he also included specimen of previously unpublished algae, with his own handwritten data on each thinsection. This is especially important since, in thinsections with a great algal diversity, it is possible to assign several sections to different taxa originally determined by Pia.

In summary this work is not a revision, but a guide to assist researchers in their study of the Pia collection. As a guide to the life of Pia some biographical material is included in HOFMANN, 1993.

2. List of Rock samples

As far as possible the authors attempted to include additional data identifying the rock samples. Most of the samples are kept at the Geologische Bundesanstalt (= former k.k. geologische Reichsanstalt), as mentioned by PIA (1912, p. 4). Another small group of samples is stored at the Geological Institute of the University of Vienna. It is not certain which of theses rock samples is still available since the Geological Institute was damaged during World War II and changed adress since Pia made his thesis.

In addition to the samples' place of origin, names of their collectors and the year each was obtained, a list of taxa provided by Pia ("Katalog der Diploporensammlung" [handwritten text by Pia himself]) gives an overview of the algae.

Identifying numbers in roman letters (ranging from I to LXXX) can be found in the handwritten "Katalog der Diploporensammlung" by Pia as well as on the rock samples kept at the Geologische Bundesanstalt. In other words the latter specimens from the Geologische Bundesanstalt are numerically identical to the specimens in Pia's handwritten "Katalog der Diploporensammlung"

The handwritten "Katalog der Diploporensammlung" is also included with the Pia thinsection collection housed at the Museum of Natural History in Vienna.

I Muschelkalk, kalkige Ausbildung, westlich von Lapcic, Blatt (= Sheet) Budua, Dalmatien. Coll. Bukowski.
Oligoporella pilosa (Taf. IV/Fig. 1, 2, 3, 4, 5, 6, 7)
Macroporella dinarica (Taf. II/Fig. 1, 2, 3, 4, 5, 6)
Kantia hexaster (Taf. VI/Fig. 13)
Teutloporella tenuis (Taf. III/Fig. 7, 8, 9, 10)

II Wettersteinkalk des Höllengebirges bei Ebensee, O.Ö. (=Upper Austria). Coll. Pia u.a.

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Diplopora annulata (Taf. VII/Fig. 5, 6, 7, 8)

III S. Uderico im Tretto, nördlich Schio. Basis der Spizze Kalke.
Teutloporella triasina (Taf. IV/Fig. 12, 13, 14)

V Muschelkalk, kalkige Ausbildung, zwischen Staniscici und dem Grkova voda Tal, Blatt (= Sheet) Budua, Dalmatien. Coll. Bukowski.
Oligoporella pilosa (Taf. IV/Fig. 8)
Macroporella dinarica

VI Dactyloporenkalk vom Niveau des M. Civillina gegen Val Retassone, Recoaro. Coll. Bittner 1881.
Teutloporella triasina (Taf. IV/Fig. 17)

VII Unterer Muschelkalk. Pontafel N. Westl. (= northwest) unter dem Zirkeljoch am Weg gegen das "Loch" Coll. Geyer.
Teutloporella aff. *triasina* (Taf. IV/Fig. 18)

VIII Muschelkalk. Kar südwestlich unter dem Malurch. N Pontafel. Coll. Geyer.
Gyroporella ampleforata (Taf. II/Fig. 18)
Collection of the "Geologische Bundesanstalt"

IX Muschelkalk. N (= north) Pontafel. Kar südwestl. unter dem Malurchberg, am Steig oberhalb der Padagoz Alpe. Coll. Geyer.
Gyroporella ampleforata (Taf. II/Fig. 19, 20, 21)
Collection of the "Geologische Bundesanstalt"

XII There exists no information about the location
Diplopora annulata (Taf. VII/Fig. 14)
Collection of the "Geologische Bundesanstalt"

XIII There exists no information about the location
Diplopora annulata (Taf. VII/Fig. 1, 2)

XIV Unterer Muschelkalk. Pontafel N (= north), unter dem Lonas Wipfel am Weg zur Kronhalterhütte. Coll. Geyer.
Kantia philosophi (Taf. VI/Fig. 17, 18, 19, 20, 21)
Gyroporella ampleforata (Taf. II/Fig. 22, 23, 25)
Collection of the "Geologische Bundesanstalt"

XV Unterer Muschelkalk. Pontafel N, östl. (= east) unter dem Sattel im O (= east) der Padagoz Alpe. Coll. Geyer.
Gyroporella ampleforata (Taf. II/Fig. 26)
Collection of the "Geologische Bundesanstalt"

XVI Wettersteinkalk. Zweckenalp bei Mythen, Ct. Schwyz.
Physoporella minutula (Taf. VI/Fig. 5, 6, 7, 8, 9, 10, 11, 12)
Macroporella helvetica (Taf. II/Fig. 16, 17)

R e m a r k : In PIA (1919) there are some comments in chapter A. "Handstücke mit Dünnschliffen" This list uses arabic numbers and gives an published overview of the rocksamples with thinsection. Number 15, 49 & 65 with the "Acquisation number" 1898, III, 53 (for 15), 1858, III, 55, (for 49) and 1878, III, 54, (for 65) are from Prof. G. Böhm, Freiburg i. B. ? (= Breisgau ?), 1893 ? The lithology of the three rock samlpes is identical, all show small wheatered specimen of dasyclad algae. From all of them thinsections have been made. Pia determined the following species:

- 15 1898, III, 53 *Physoporella minutula*
- 49 1858, III, 55 *Physoporella minutula, Diplopora helvetica, D. annulatissima*
- 65 1878, III, 54 *Physoporella minutula*

The samples are available at the Museum of Natural History in Vienna (using the numbers 15, 49, 65 [PIA, 1919]). Although none of these samples has got a roman number XVI as he used it for the rock samples at the k.k. geologische Reichanstalt, it can be assumed that these are the rock samples where the thinsections have been made from.
Collection of the Museum of Natural History

XX Mündung des Gsellbaches südlich Sexten, am Waldrande. Coll. Geyer.
Macroporella Bellerophontis (Taf. II/Fig. 7, 8, 9)

XXI Nordabhang der Brandmäuer bei Puchenstuben. Coll. Bittner 1891.
Physoporella pauciforata (Taf. V/Fig. 9, 10, 11, 12)
Collection of the "Geologische Bundesanstalt"

XXII Gastropodenführender Diploporenkalk. Nestlinger Wandbei Krimml.
Physoporella pauciforata (Taf. V/Fig. 17)

XXIV Lichter Wettersteinkalk. Fuß des Windhag nordöstlich Grünau. Coll. Geyer.
Diplopora annulata (Taf. VIII/Fig. 2)

XXV Dunkler Wettersteinkalk. Südlich unter dem Windhagberg, nordöstlich Grünau. Coll. Geyer.
Diplopora annulata (Taf. VII/Fig. 9, 10, 11)

XXVI Bad Innichen, östliches Paralleltal.
Macroporella Bellerophontis (Taf. II/Fig. 12)

XXVII Talausgang südlich von Santa Croce.
Macroporella Bellerophontis (Taf. II/Fig. 10, 11)
Collection of the "Geologische Bundesanstalt"

XXVIII Schwarzenberg bei Türnitz. Coll. Bittner 1891.
Physoporella pauciforata (Taf. V/Fig. 13, 14, 15, 16)
Collection of the "Geologische Bundesanstalt"

XXX Schlerndolomit. Val Sorda bei Latemar im Fleimstal, Südtirol. Coll. Dr. Doelter.
Kantia dolomitica (Taf. VI/Fig. 14, 15, 16)
Unterste Schicht der oberen Trias; von Richthofen als (?) Mendola Dolomit bezeichnet gehört aber vielleicht dem Schlerndolomit zu?
Collection of the "Geologische Bundesanstalt"

XXXIII Virgloria-Kalk, Venedig. M. S. Rocco, Val (?) del Orco, Tretto. Coll. H.P. Hartnigg.
Teutloporella triasina (Taf. IV/Fig. 15, 16)
Collection of the "Geologische Bundesanstalt"

XXXIV Schlegelbergwände ober Vorderstaff bei Schwarzenbach a.d. P. (= at the Pielach). Coll. Bittner 1896.
Oligoporella prisca (Taf. V/Fig. 3, 4, 5, 6, 7)
Physoporella pauciforata (Taf. V/Fig. 18)
Diplopora praecursor
R e m a r k There exist two boxes with the same number (XXXIV) and the same locality. Both contain rock samples which can be clearly identified as remnants from making thinsections.
Collection of the "Geologische Bundesanstalt"

XXXV Weg von der Mittereckalm zur hohen Brücke über die Taurach bei Tweng.
Diplopora debilis (Taf. VIII/Fig. 3)

XL Muschelkalk, Spizzekalk. Südwestlich unter der Malurch-Spitze, Pontafel N.
Diplopora annulata (Taf. VII/Fig. 12,13)

XLI Liegendes (= Lower part) des Spizzekalkes. Tretto ?
Teutloporella triasina (Taf. III/Fig. 14)
This is not identic with the text in PIA 1912, where *Teutloporella vicentina* TORNQU. spec. is described. A comparison with the thinsection makes sure, that he meant the same specimen which can be found in thinsection XLI/2.

XLII Diploporen-Dolomit, Weg von Tweng zur David-

Alpe; Coll. M. Vacek 1886.
Diplopora debilis (Taf. VIII/Fig. 4, 5, 6, 7)
Collection of the "Geologische Bundesanstalt"

XLV Spizzekalk. Südabhang der oberen Kalkdecke des M. Enna oberhalb Torre Belvicino. Coll. Bittner 1878.
Teutloporella icentina (Taf. III/Fig. 11, 12, 13)
Teutloporella vicentina var. *nana* (Taf. III/Fig. 15, 16).
Collection of the "Geologische Bundesanstalt"

L Wettersteinkalk (Diploporenkalk). Nördlich unter Steyersteg im obersten Bodinggraben, Sengsengebirge. Coll. Geyer 1907.
Diplopora annulata (Taf. VII/Fig. 16)

LIV Oberer Muschelkalk mit Gyroporellen. Sarenkofel. Dolomit mit Gyroporellen und Crinoiden. Abgestürztes Stück des oberen Muschelkalkes zwischen Sues und Sarenkofel. 30. Juni 75 (= 1875)
Physoporella pauciforata (Taf. V/Fig. 19)
Oligoporella serripora (Taf. IV/Fig. 9, 10, 11)
Collection of the "Geologische Bundesanstalt"

LVI Schwarzenberg bei Türnitz; Coll. Bittner 1891
Oligoporella prisca (Taf. V/Fig. 8)

LVII Fuchsriegel südlich von Unter Steinrott- (recte Fuchsriegel)-bauer bei Schwarzenbach an der Pielach. Coll. Bittner 1896.
Macroporella alpina (Taf. II/Fig. 13, 14, 15)

LVIII Hall - Bettelwurf, Unterinntal, Tirol.
Teutloporella gigantea (Taf. III/Fig. 5, 6)

LXI Dactyloporenkalk. Westausläufer des Mariahilfer Berges, Guttenstein. Coll. Bittner 1878.
Diplopora annulata (Taf. VII/Fig. 1)

LXII Heller, massiger Kalk mit Dactyloporiden. Im Hangenden (= Upper part) des Guttensteiner Kalkes und im Liegenden (= Lower part) des kieseligen, schwarzen Knollenkalkes (Reiflinger Kalkes) eine durchlaufende Wand bildend. Tiefenbachgraben bei Saalfelden.
Physoporella dissita (Taf. VI/Fig. 1, 2, 3, 4)
Collection of the "Geologische Bundesanstalt"

LXIX There exists no information about the location
Diplopora annulata (Taf. VII/Fig. 15)

LXXIII Schiestlhaus am Hochschwab. Coll. Bittner 1889
Teutloporella herculea (Taf. III/Fig. 1)
R e m a r k : The rock sample yields specimen with a lenght up to 3.5 cm.
Collection of the "Geologische Bundesanstalt"

LXXIV Dreimarkstein, Raxalpe.
Teutloporella herculea (Taf. III/Fig. 2)

LXXVI Chemnizienkalk (oberer Alpenkalk). Ehrwald (Gaistal).
Diplopora annulata (Taf. VII/Fig. 17).
Collection of the "Geologische Bundesanstalt"

LXXIX Reiflinger Kalk. Östlich von der Brennalpe südwestlich Kleinzell. Coll. Czizek und Stur.
R e m a r k : The two pieces of rock in the box have each an affixed handwritten notice: „Brandmäuer NO-Abhang" This locality is described from sample number XXI. Maybe these two rock samples were changed. However as the lithology is similar, there could also belong all samples to number XXI, in this case the rock samples from LXXIX would have been lost.
Oligoporella prisca (Taf. V/Fig. 1, 2)
Collection of the "Geologische Bundesanstalt"

LXXX There exists no information about the location
Teutloporella gigantea (Taf. III/Fig. 3, 4)
Collection of the "Geologische Bundesanstalt"

3. Conclusion

Using previously unpublished data from Pia, some relevant rock samples in the collection of the Geologische Bundesanstalt could have been located. Among them are a number of new species of algae such as: *Kantia philosophi, K. dolomitica, Macroporella helvetica, Oligoporella prisca, O. serripora, Teutloporella vicentina* var. *nana* which Pia identified in 1912 and are of special interest for new studies. All samples are available for making still another series of thinsections in case of revision.

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4. References

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