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DIE CONCHYLIEN
DES
MAINZER TERTIÄRBECKENS.

VON

DR. FRIDOLIN SANDBERGER.

PROFESSOR DER MINERALOGIE AM GROSSHERZOGLICHEN POLYTECHNICUM ZU KARLSRUHE

TAFEL N.

WIESBADEN:

KREIDEL UND NIEDNER, VERLAGSHANDLUNG.

1858.

bis

1862.

Wiesbaden, Verlag v. Kreidel & Nisimer.

A. Kolb lith.

1. *Strophostoma tricarinatum* M. Braun.
2. *Graspedopoma utriculosum* Sandb.
3. *Cyclostoma bisulcatum* v. Zieher.

4. *Cyclostoma Pupa* A. Braun.
5. *Pomatias Labellum Thomae* sp.

6. *Helix subverticillus* Sandb.
7. ——— ead. var.
8. ——— *stenotrypia* A. Braun.

Wiesbaden Verlag v. Kreidel & Niedner.

E Koib lun

- 1 *Helix Goldfussii* Thomae
2 ——— *imbricata* A. Braun
3. ——— *deplanata* Thomae.
4 ——— *subvillosa* Sandb.

5. *Helix punctigera* Thomae
6. ——— *crebripunctata* Sandb.
7. ——— *suboccidentalis* Sandb.
8. ——— *lunula* Thomae.

- 7 *Helix multicostata* Thomsae
 10 — *disculus* A Braun
 11 — *subsoluta* Sandb
 12. — *expansilabris* id.

Wiesbaden, Verlag v. Kreidel & Niedner.

A. Kolb lith.

1. *Helix pomiformis* A. Braun.
2. — *Matiaca* Stein.
3. — *Rahtii* A. Braun.
4. — *lepidotricha* A. Braun.

5. *Helix subcarinata* A. Braun.
6. — *pulchella* Müll.
7. — *uniplicata* A. Braun.
8. — *pupula* A. Braun.
9. — *paludinaeformis* A. Braun.

10. *Helix involuta* Thomae.
11. — *phacodes* id.
12. — *sublenticula* Sandt.
13. — *osculum* Thomae typus.

Wiesbaden, Verlag v. Krieger & Niedner

A. Kolb lith.

- 1 *Helix osculum* Thoms. var. *depressa*
 2 ——— *affinis* id.
 3 ——— *Moguntina* Desh. var. *major*
 4 ——— *ead.* var. *minor*

5. *Helix Moguntina* Desh. var.
 6. *ead.* var. *splendideformis*
 7 *Helix deflexa* A. Braun

- 8 *Helix hortulana* Thoms.
 9 ——— *oxystoma* id.
 10 ——— *subsulcosa* id.
 11 ——— *Ramondi* Al. Brongn.

1. <i>Bulinus gracilis</i> Thomae	8. <i>Pupa lomellidens</i> Sandb	4. <i>Pupa polymorpha</i> A. Braun
2. <i>Olandina cancellata</i> Sandb	9. <i>Planorbella</i> A. Braun	5. <i>Littorina</i> Turon - <i>protophylla</i> A. Braun
3. — <i>subsulcosa</i> Thomae	10. <i>Rastu</i> id.	16. <i>Residens</i> Sandb
4. — <i>Sandbergeri</i> id.	11. — <i>quadrangulata</i> id.	17. — <i>Prigonostoma</i> A. Braun
5. — <i>lubricella</i> A. Braun	12. <i>retusa</i> id.	18. — <i>tiarula</i> id.
6. <i>Pupa variabilis</i> Drap. = <i>subvar. Sandb.</i>	13. <i>cryptodius</i> id.	19. <i>Vibrona intermedia</i> Reuss
7. — <i>subconica</i> Sandb		20. <i>Clausilia bulimifformis</i> A. Braun

Verlag von Krieger & Co.

Verlag von Krieger & Co.

Verlag von Krieger & Co.

1. *Succinea suturalis* A. Braun sp.
2. *Succinea subtilissima*
3. *Succinea uncinata* A. Braun sp.
4. *Taraxacum nanum* Sandb.
5. *Taraxacum antiquum* A. Braun

6. *Almatia capax* Hyst. sp.
7. *Almatia subrotunda* A. Braun sp.
8. *Intorinella obtusa* Sandb.
- 9-9'. *Intorinella acuta* Drap. sp.
- 9'-9''. *Intorinella inflata* Krijas sp.
10. *Paludina obtusa* Sandb.

11. *Paludina subrotunda* Sandb.
12. *Leptopoma unornatum* Sandb.
13. *Leptopoma subrotunda* A. Braun
14. *Melampus subrotunda* A. Braun
15. *Melampus Escherti* Al. Brongn.

Anst. v. J. Lehnhardt in Mainz

Wiesbaden, Verlag v. Kreidel & Niedner

J. B. Kolt. lith.

1. *Lunneus pachygaster* Thomae
2. ——— *subpalustris* id.
3. ——— *cretaceus* id.
4. ——— *pachygaster* id. juv.
5. ——— *bullatus* v. Klein.

6. *Lunneus minor* Thomae
7. ——— *acutilabris* Sandb.
8. *Planorbis solidus* Thomae
9. ——— *declivis* A. Braun.
10. ——— *laevis* v. Klein.

11. *Planorbis semicostatus* Sandb.
12. a, d, e, f, g. *Verutina fluvialis* L. sp.
12. b, c. ——— *callifera* Sandb.
13. ——— *fulminifera* Sandb.
14. ——— *rhenana* Thomae

Amst. v. Lehnardt in Mainz

Wiesbaden, Verlag von Kreidel & Thiermer

J. B. Kolb lith

Cerithium conjunctum Desh.
3 *id.* *margaritaceum* Brochi var. *calcaratum* Grat.
id. var. *moniliforme* Grat.

4 *Cerithium submargaritaceum* A. Braun
5 *id.* *Lamarckii* Desh.
6 *id.* *plicatum* Lam. var. *papillatum* Sandb.

Verf. v. J. G. Th. v. Mante

Wiesbaden, Verlag v. Kreidel & Pöschner

C. B. No. 1004

1 <i>Cerithium plicatum</i> Lam. var. <i>enodosum</i> S	5, 6 <i>Cerithium plicatum</i> var. <i>multinodosum</i> S	11 <i>Cerithium</i> <i>Rahtu</i> A. P. v. v.
2, 3 id var. <i>halictii</i> Hyst	7 id <i>plicatum</i> Lam. var. <i>pustulatum</i> S	12 id <i>irpicosatum</i> Sars
4 id — <i>intermedium</i> S	8 id <i>laevissimum</i> v. Schlot. sp.	13 id <i>lima</i> Pels
	9 id <i>dissimulatum</i> Desh	

Verlag v. Kreidel & Neudner

Wiesbaden Verlag v. Kreidel & Neudner

1. *Cerithium dentatum* Desf.
2. *subvaricosum* A. Braun.
3. *Boblayei* Desh.
4. *conoidale* Lam.

5. *Cerithium perpersum* L.
6. *Chenopus acutidactylus* Sandb.
7. *tridactylus* A. Braun.
8. *speciosus* Schott. & Sy.

9. *Rissoa succinata* Agass.
10. *Duboisii* id.
11. *Michaudii* id.
12. *Antonia roquandi* A. Braun.

Verlag v. Kroydel & Niedner

Verlag v. Kroydel & Niedner

Verlag v. Kroydel & Niedner

1. *Scalaria pusilla* Phil
 2. ——— *crassitexta* Sandb
 3. ——— *rudis* Phil
 4. ——— *recticosta* Sandb
 5. *Phasianella multicingulata* Sandb

6. *Trochus incrassatus* Desh
 7. ——— *rhenanus* Merian
 8. ——— *sexangularis* Sandb
 9. ——— *amblyconus* id
 10. ——— *margaritula* Merian
 11. ——— *trochlearis* Sandb

12. *Turbo alterninodosus* Sandb
 13. ——— *cancellato-costatus* id
 14. ——— *alterninodosus* id
 15. *Solarium bimoniliferum* id
 16. *Adeorbis decussatus* id

(a) *multicingulata* Sandb.

Druck v. J. J. Neumann in Mainz

Wiesbaden, Verlag v. Kreidel & Niedner

J. J. Kolb lith.

- 1 *Cerithium evarisum* Sandb.
2 *— binoniliferum* id.
3 *Turritella crispula* id.
4 *Vermetus umbricatus* id.

- 5 *Litorina obtusangula* Sandb.
6 *Lacuna eburnaeformis* id.
7 *— subeffusa* id.

- 8 *Lacuna labiata* Sandb.
9 *Cyclostrema nitidum* id.
10 *Xenophora Lyelliana* Bosq.
11 *Natica hantoniensis* Sora.

Im Most v. Lehmann in Mainz.

Wiesbaden, Verlag v. Kreidel & Niedner

J. B. Kolb

1. *Natica crassatina* Lam.
2. *micromphalus* Sandb.
3. *conomphalus* id.

4. *Calyptrea striatella* Nyst.
5. *Capulus navicularis* Sandb.
6. *transversus* id.
7. *Patella moguntina* A. Braun

8. *Patella alternicostata* Sandb.
9. *excentrica* id.
10. *Emarginula oblonga* id.

Verlag v. J. Neumann, Neudamm in Mainz.

Wiesbaden, Verlag v. Kreidel & Neudner

J. B. Kell, 1881

1. *Emarginula Schlotheimi* Bronn
2. ————— *conica* Sandb
3. *Chiton tenuissimus* id
4. ————— *virgifer* id
5. *Dentalium Sandbergeri* Bosquet

6. *Dentalium Kickxii* Nyst
7. *Volvaria multirugulata* Sandb
8. *Tornatella Nystri* Duchastel
9. ————— *limneriformis* Sandb
10. ————— *acuta* id

11. *Ringicula acuta* Sandb
12. *Bulla nitens* id
13. ————— *turgidula* Desh
14. ————— *conoides* id

lith. Anst. v. Lehmann in Mainz

Wiesbaden, Verlag v. Kreidel & Niedner

- 1 *Odontostoma aculeatum* A. Braun sp.
- 2 *luculentum* Sandb.
- 3 *Conus symmetricus* Desh.
- 4 *Turbonilla subulata* Merian sp.

- 5 *Turbonilla digitata* Sandb.
- 6 *Eulima acicula* id.
- 7 *Cancellaria Brauniana* Nyst.
- 8 *rugens* Sandb.
- 9 *minuta* A. Braun

- 10 *Pleurostoma* A. Braun sp.
- 11 *luculentum* Sandb.
- 12 *Conus* A. Braun sp.
- 13 *Dactylina* A. Braun sp.

Lith. Anst. v. J. Lehnhardt in Mainz.

Wiesbaden, Verlag v. Kreidel & Nudner

J. P. Kolb Lith.

1 *Litorinella Draparnaudi* Nyst sp.
2 ——— *taxostoma* Sandb.
3 *Odontostoma scalare* Sandb.
4 *Pleurotoma Selysi* De Kon. var.

5 *Pleurotoma Parkinsoni* Deshayes.
6 ——— *obliquirostrata* Sandb.
7. ——— *subconoides* Sandb.
8 ——— *scalariaeformis* Sandb.

9 *Pleurotoma subdenticulata* Münst.
10 ——— *subra* Philippi
11 *Borsonia Delacii* Nyst
12 *Columbella inornata* Sandb.

Lith. v. J. Lehmann in Mainz

Verlag v. K. v. K. & H. v. K.

1872

- 1 *Fusus* *incoaxus* Sandb.
- 2 — *columbelliformis* id.
- 3 *Cerithium* *elegans* Desh.

- 4 *Turritella* *scalaris* Sandb.
- 5 *Fusus* *elongatus* Nyst
- 6 — *retroscosta* Sandb.

- 7 *Fusus* *incoaxus* Sandb.
- 8 *Purpura* *subnuda* Sandb.
- 9 *Fusus* *Konradi* Nyst

Druck: H. St. v. J. L. L. in Mainz

Wiesbaden, Verlag v. Kreidel & Meißner

Druck: H. St. v. J. L. L.

1. *Fructum flandricum* de Ron
2. " *foveolatum* Sordt
3. *Murex Deshayesi* Doyl
4. " *Lamarckii* Grat

5. *Murex serratus* Grat
6. " *inservicus* A. Braun
7. " sp.

8. *Tridacna* " " " " " "
9. *Heterostoma* " " " " " "
10. *Cuma* " " " " " "
11. *Pleurotoma bicingulata* Sandt

Druck v. Lehnardt in Mainz.

Wiesbaden, Verlag v. Kreidel & Niedner.

1871

1. *Tridacna Waelii* Nyst var
 2. ——— *multisulcatus* id
 3. *Mitra semiplicata* Sandb

4. *Mitra perminuta* A Braun
 5. *Voluta modesta* Merian
 6. ——— *Rathieri* Hebert

7. *Isidorella* ——— *faci*
 8. *Isidorella* ——— *parv*
 9. *Cypraea sutura* A Braun

Verlag v. J. Lehnhardt in Mainz

Verlag v. J. Lehnhardt in Mainz

1. <i>Cassidaria</i> sp.	2. <i>Ornatella</i> sp.	3. <i>Ornatella</i> sp.
4. <i>Ornatella</i> sp.	5. <i>Ornatella</i> sp.	6. <i>Ornatella</i> sp.
7. <i>Ornatella</i> sp.	8. <i>Sandbergeria cancellata</i> Nitzsch	9. <i>Vermetus cristatus</i> Sindh
10. <i>Cassidaria</i> sp.	11. <i>Thracia</i> sp.	12. <i>Thracia</i> sp.
13. <i>Thracia</i> sp.	14. <i>Thracia</i> sp.	15. <i>Thracia</i> sp.
16. <i>Thracia</i> sp.	17. <i>Thracia</i> sp.	18. <i>Thracia</i> sp.
19. <i>Thracia</i> sp.	20. <i>Thracia</i> sp.	21. <i>Thracia</i> sp.
22. <i>Thracia</i> sp.	23. <i>Thracia</i> sp.	24. <i>Thracia</i> sp.
25. <i>Thracia</i> sp.	26. <i>Thracia</i> sp.	27. <i>Thracia</i> sp.

Verlag von M. J. Neumann in Mainz

Wiesbaden, Chr. W. Kreidel's Verlag

Verlag von M. J. Neumann

1. *Paraplicata subtripartita*, id.
2. *Paraplicata subtripartita*, id.
3. *Paraplicata latipes*, id.

4. *Paraplicata faba*, Sandb.
5. *Paraplicata crassa*, id.

6. *Paraplicata faba*, Sandb.
7. *Paraplicata crassa*, id.
8. *Paraplicata crassa*, id.

3. Sandu-ger Man-er Borken

West. K. M. (aus W. Kreiden V. 1.2.)

Taf XVII.

- 1. *Sphenopsis scalaris*, Braun sp
- 2. *Sphenia papyacea* Sandb
- 3. *Corbulomya trianula* Nyst
- 4. " " *elongata* Sandb

- 5. *Corbulomya nitida* Sandb
- 6. " *sphenioides*, id
- 7. " *crassa*, "id
- 8. *Corbula ussata* "id
- 9. *Mastra fabula* Sandb

- 10. *Corbula longirostris* Desh
- 11. " *longalis* Sandb
- 12. " *herkulensis* Nyst
- 13. " *longirostris* "id

Lith. Anst. v. J. Leinhardt in Mainz

Wiesbaden: J. W. Riedels Verlag

M. Kolb lith.

- 1 *Perna a. p. p. Desh.*
- 2 *Perca elongata Sandb.*
- 3 *Synchirops elegans, Desh.*

- 4 *Tellina Heberti Desh.*
- 5 — *faba Sandb.*
- 6 — *Nystu Desh.*
- 7 *Cytherea subarata, Sandb.*

- 8 *Cytherea depressa Desh.*
- 9 10 — *franki Desh.*
- 11 — *subarata Desh.*

Wien, 1851. Museum Naturh.

Wien, 1851. Museum Naturh.

Wien, 1851. Museum Naturh.

Cythæra incrassata Sow. var. *lacunata* 4
id. var. *obtusangula* Sandb. Sandb. 5
id. var. *solida* id.

Cythæra *...* *...*
... *...* *...*

Cythæra *...* *...*
... *...* *...*

5th Ans: Helmut in Mainz

Wien: Anton Chr W Kreidels Verlag

17 Koda, 1976

Decidua subsericea D. Don4 *Passatilia Bonni M.*

5 *Wolke iame sa Sandh*

Offh. Anst. J. Leinhardt in Mainz

Wiesbaden, Ch. W. Kreidel's Verlag

J. B. Kolb, lith.

1. *Astarte plicata* Merzan
2. *rostrata* Sandb.
3. *Cyrena semistriata* Desh.

5. *C. (Corbicula) donacina* Braun
6. *Faujasii* Desh.
7. *Psidium antiquum* Braun

8. *Poronia rosea* Sandb.
9. *Diplodonta fragilis* Braun
10. *Lucina undulata* Lat.

Lith. Anst. v. J. Neuhard in Mainz

Wiesbaden, v. W. Krell's Verlag

Druck v. J. Neuhard in Mainz

Woodia lamella a Lande
Lucina squarrosa Lam.
Heberti Desh.

4 *Lucina* *trilineata* He
 5 *Lucina* *trilineata* Sa

6 *Lucina* *trilineata* Desh
 7 *Lucina* *trilineata* Desh
 8 *Lucina* *trilineata* Desh

1844. Gest. v. J. Leinhardt in Mainz

Wiesbaden, Ch. W. Kreidel's Verlag

J. B. Ziegler

Thanaecogyrus Braun
Cardium Kautsky, Heb.
Costeula, Merian

4 *Leda Deshayesi* Duch. sp.
 5 *gracilis*, Desh.
 6 *Unio pinguis*, Sandb.

7 *Nucula* *truncata* L.
 8 *lyrata* Brug.
 9 *phryganea* Sandb.

Verlag v. J. Neumann, Neudamm.

Wiesbaden, Ch. W. Kreidels Verlag.

Arca 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22.
Sandberger id.
Levassata, No. 1.

4 *Arca* *pretiosa*, Des?
 5 *Limus* *s. rugidens*, Sand.

Arca *pretiosa*, Des?
Limus *s. rugidens*, Sand.

Verlag v. J. Neumann, Neudamm

Wiesbaden Ch. W. Kreidel, Verlag.

D. K. 1883

1 *Pectunculus angustatus* Lam.
2 *id.* var. *obliteratus*, Desh.

3 *Pectunculus obovatus*, Lam.
4 *Mytilus acutirostris*, Sand.
5 *— Faujasii* Brugn.

6 *Mytilus* *—* *—*
7 *Modiola* *—* *—*

Verlag v. W. Kreidel's Verlag

Wiesbaden, Ch. W. Kreidel's Verlag

1 *Modiola micans*, Braun
2 *Nijstii* Kickx sp
3 *Perna indeferm*

4 *Perna Sandbergeri* Desh
5 *Avicula stampinensis* id

6 *Avicula eraudoti*, Desh
7 *Lima Sandbergeri*, Desh
8 *Lithodomus debilis*, Desh

Verlag v. J. Neumann, Neudamm.

Wiesbaden: W. Kreidel's Verlag.

J. R. Kuhn.

1 *Spadylus leucospina*, Sandb.

2 *Pecten Hoeninghausi*, Defr.
3 ——— *inæqualis*, Bourn.

4 *Pecten compositus*, Goldf.

Verlag von J. Neumann, Neudamm

Wiesbaden, Ch. W. Kreidel's Verlag

J. B. Kolb lith.

Pecten foveolatus Sandb.

2. *Pecten decussatus* v. Münster
3 4 6 — *pictus* Goldfuss

5. *Pecten inaequalis* Brömer var.

Lith. Anst. v. J. Leinhardt in Mainz

Wiesbaden, Ch. W. Brendels Verlag

1 *Ostrea cyathula*, Lam.
2 *Terebratulina opercularis*, Sandb.

3 *Terebratulina fasciculata*, Sandb.
4 *Argiope subradiata*, id.
5 *Argiope crenata*, id.

6 *Ostrea allifera*, Lam.
7 *Argiope megacephala*, Sandb.

Verf. u. st. v. F. Feinhardt in Mainz

Wiesbaden, Ch. W. Fiedrichs Verlag.

J. B. Kolb lith.

- A *Spondylus tenuispinus* Sandb.
 1 *Ostrea callistera*
 2 — *rhensana*, Merian.
 3 *Plicatula dispar*, Sandb.
 4 *Helix densipapillata*, Sandb.
 5 *Planorbis splendens*, Braun sp.
 6 *Nematula planapicalis* Sandb.
 7 *Pupa cryptodus* Braun
 8 *Helix colorata*, Braun
 9 — *costulata striata* Gröppen

- 10 *Pupa ulloendus* Sandb.
 11 — *subconica* id.
 12 *Cyrena concentrica*, id.
 13 *Murex areolifer* Sa-R.
 14 *Pleurotoma bisangulata* Sandb.
 15 *Clausilia articulata* id.
 16 *Pupa impressa* id.
 17 *Acicula fildera* id.
 18 *Helix euglyphis*, Reuss
 19 *Carychium costulatum*, Sandb.
 20 *Helix impressa*, id.

- 21 *Planorbis cordatus*, Sandb.
 22 *Paludina succineaformis* id.
 23 *Tiphys pyruloides* A. Braun.
 24 *Cydotrema rotellaeformis* Grut sp.
 25 *Turbonilla compressicosta* Sandb.
 26 *Pupa microhelix*, id.
 27 *Neurina fluctuans* Linn.
 28 *Pleurotoma amblycoelus* Linn. 12.
 29 *Patella papiracea* Sandb.
 30 *Bulla deilepis*, Sandb.

3 2044 106 213 408

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~~Nov 2 1974~~