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Mayer's Stratotype Area Aquitanian Faunas

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With 1 table in the text

ABSTRACT

The original proposition (MAYER 1858) of the Aquitanian Stage was supported by a minimum of faunal evidence. Examination of MAYER's collections, still available, has shown that the basic molluscan evidence was vastly greater than he published. The molluscan assemblages of the Aquitanian of S.W. France in his collections are listed and modern taxonomic equivalents given.

Work in our laboratories, primarily directed towards research into the microfaunas of the Neogene, has involved the identification of mollusca present in our microfaunal samples and also an appraisal of the molluscan evidence originally used by the proposers of the European Tertiary Stages.

In the case of the Aquitanian Stage the original proposition (MAYER 1858) appears to be supported by very meagre faunal evidence and from the six subdivisions he proposed (Beds 1–6 in ascending order). MAYER recorded only 8 forms from Bed 1, 5 forms from Bed 2, 7 forms from Bed 3, 9 forms from Bed 4, planorbids and lymnaeids from Bed 5 and 35 forms from Bed 6. Apparently he did not publish any further detailed information on the molluscan assemblages and stratigraphical palaeontology of the Aquitanian Stage, although it is abundantly clear from other and later workers, e.g. COSSMAN and PEYROT, that beds referred to this stage in S.W. France contain rich molluscan assemblages.

Recently we became aware that the Mayer collections of fossils had been transferred from storage in Zurich as a temporary depositum to the Naturhistorisches Museum in Basle and were available there for study. The collections comprise three main parts: a 'general' collection, a systematic collection arranged by genera and a stratigraphic collection arranged by stages. The 'general' collection contains very little from the Aquitanian of S.W. France, but the systematic and stratigraphic collections contain large assemblages of mollusca from the Aquitanian of the type region and it is quite apparent that MAYER had abundantly more fossil evidence than he listed in his 1858 paper. Of the last two the systematic collection is by far the larger and the smaller stratigraphic collection would seem to have been a selection made by MAYER illustrative of the assemblages but not fully representative of the faunal content of any one stage. Only about half of the molluscan species of which the provenance was (fide MAYER's labels) S.W. France are represented in the stratigraphic

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collection most of the remainder (marked + in the appended list) being in the systematic collection.

In all three parts of MAYER's collection the specimens are labelled with name, locality and stage; the stage collection being subdivided in number sequence from base to top and these subdivisions being frequently further refined by the alphabetic suffixes a, b, c, etc. It was noticed that on the collection labels the first two units of the Aquitanian were indicated by roman numerals (I and II) while the subsequent units were indicated in arabic (3, 4, 5 and 6). We have no information regarding the significance of this and have, in our list of the species present in the collection, recorded these numbers in the same form as on the original labels. Likewise the subdividing suffixes have been recorded as on the originals, but again we have no knowledge of any published information regarding their meaning or value in further refining the numerical subdivisions of the Aquitanian Stage.

In contrast to the very scant fauna published by MAYER in proposing the Aquitanian Stage we have found that his collections contain a large molluscan assemblage collected from the Aquitanian of S.W. France, in fact, still extant in the collection are 158 forms recorded as being from Aquitanian I, 159 from Aquitanian II, 80 from Aquitanian 3, 20 from Aquitanian 4, 3 from Aquitanian 5 and 183 from Aquitanian 6: all from S.W. France. Of this very numerous assemblage all but 117 taxa are contained in the subsequent very comprehensive monograph of COSSMAN and PEYROT. In modern taxonomy these numbers are slightly reduced by synonymy. Allowing for this and omitting from the count those forms of which we have been unable to confirm the identification the count is still large, viz: 108 from Aquitanian I, 112 from Aquitanian II, 62 from Aquitanian 3, 17 from Aquitanian 4, 2 from Aquitanian 5 and 13b from Aquitanian 6.

Thus our investigation has shown that in founding the Aquitanian Stage MAYER had knowledge of vastly greater molluscan assemblages from it than he ever published. It therefore seems to us desirable to place on record the full molluscan evidence that was available to him in these collections and which, it may be presumed, was the true faunal basis for his proposition of the stage. Wherever possible we have given the up-to-date taxonomic equivalents for MAYER's identifications.

Our search through the Mayer collections failed to reveal any specimens from the Aquitanian of the three Palaeogene forms, *Cyrena convexa*, *Lucina undulata* and *Ostrea cyathula*, included by MAYER in his original Aquitanian list.

We are indebted to the Director of the Naturhistorisches Museum, Basle, for permission to examine the Mayer collection, and in particular to Dr. H. KUGLER for making the locale of the collection known to us and facilitating our arrangements to study it, and to Dr. P. JUNG for making available to us all the facilities of his department; also to the British Petroleum Co. Ltd., for permission to publish.

Tab. 1. Mayer Collection, Aquitanian Beds 1–6, Stratotype Area.

Legend:
× – in stratigraphic collection, attributed to bed s. l.
a, b, c, etc. – attributed to restricted sub-units a–e of beds.
+ – in systematic collection, not represented in stratigraphic collection.
0 – in collections but not recorded by MAYER in *Journal de Conchyliologie*, vols. *6–51*.

Mayer's name	Suggested modern taxon	I	II	3	4	5	6
Auriculina striata	*Ringicula* (*Ringiculella*) *tournoueri* Morlet	×	+	–	×	–	×
Auriculina striata (Prob. = *Ringicula tournoueri*)	*Ringicula* (*Ringiculella*) *tournoueri Morlet*	–	–	+	–	–	–
Buccinum aquitanicum	*Phrontis aquitanica* (Mayer)	×	+a	–	–	–	×
Buccinum aurorae		–	0+	–	–	–	–
Buccinum avus		–	0+	–	–	–	–
Buccinum baccatum var. *juven.*	*Cyllene* (*Cyllenina*) *baccata* (Basterot)	–	×	–	–	–	–
Buccinum burdigalense		–	0+	–	–	–	0
Buccinum galliculum		0+c	0	–	–	–	–
Buccinum galliculum (= *Nassa* (*Cyl.*) *gallicula*		–	–	0+b	–	–	–
Buccinum incrassatum	*Hinia turonensis* (Deshayes)	–	×	–	–	–	–
Baccinum incrassatus Micht.	*Hinia turonensis* (Deshayes)	–	–	–	–	–	×
Buccinum lyratum	*Cyllene desnoyersi* (Basterot)	–	–	+b	–	–	–
Buccinum saucatense		–	0	–	–	–	–
Baccinum turbinellus	*Hinia turbinella* (Brocchi)	–	+	–	–	–	×
Calyptraea chinensis	*Calyptraea chinensis* (Linne) *taurostriatellata* Sacco	bcd	+a	b	×	–	×
Calyptraea costaria	*Calyptraea* (*Trochita*) *costaria* Grateloup	–	–	–	–	–	×
Calyptraea costaria Grat. *ornata* Bast. sec. Hoernes	*Calyptraea* (*Trochita*) *costaria* Grateloup/*C.*(*T.*.) *ornata* Basterot	–	–	–	–	–	×
Calyptraea deformis	*Crucibulum* (*Bicatillus*) *deforme* (Lamarck)	cd	+a	–	–	–	–
Calyptraea depressa	*Calyptraea* (*Trochita*) *depressa* (Lamarck)	a	–	–	–	–	×
Calyptraea ornata	*Calyptraea* (*Trochita*) *ornata* Basterot	–	+a	–	–	–	–
Calyptraea ornata Bast. non Hoernes	*Calyptraea* (*Trochita*) *ornata* Basterot	–	–	–	–	–	×
Calyptraea subtrochiformis	*Calyptraea* (*Trochita*) *ornata* Basterot	+cd	–	–	–	–	–
Cancellaria acutangularis	*Trigonostoma* (*Ventrilia*) *acutangulum* (Faujas) (s.l.)	+c	–	–	–	–	–
Capulus bistriatus	*Hipponix bistriatus* (Grateloup)	–	–	+	–	–	+
Capulus leognanicus		–	–	0+b	–	–	–
Capulus saucatsensis		–	–	–	–	–	0
Capulus sulcatus	*Hipponix sulcatus* (Borson)	–	–	–	–	–	×
Cassis abbreviata		0c	0+a	–	–	–	0
Cassis crumena	*Cypraecassis subcrumena* (d'Orbigny)	–	–	–	–	–	×
Cerithiolum lacteum Phil.		–	0+a	–	–	–	–
Cerithiopsis perversa	*Triphora adversa* (Montagu) mut. *miocaenica* Cossmann et Peyrot	–	–	–	–	–	×
Cerithiopsis scabra		–	0a	–	–	–	0+
Cerithiopsis spina		–	–	–	–	–	0
Cerithiopsis trilineata Phil.	?*Seila turritissima* (Sacco)	–	+a	–	–	–	×
Cerithium aquitanicum	'*Cerithium*' *aquitanicum* Mayer	–	–	–	–	–	×

MAYER's name	Suggested modern taxon	I	II	3	4	5	6
Cerithium (P) bicinctum		0+c	0+a	–	–	–	–
Cerithium bidentatum	*Terebralia bidentata* (Defrance, in Grateloup)	×	+a	–	–	–	–
Cerithium bronni	*Ptychocerithium heptagonum* (Mayer-Eymar)	–	+	–	–	–	×
Cerithium buzoti		–	0+	–	–	–	0+
Cerithium calculosum	*Chondrocerithium calculosum* (Defrance)	abc	+	×	–	–	×
Cerithium distinctissimum		–	–	–	–	–	0+
Cerithium duboisi	*Terebralia lignitarum* (Eichwald)	0	–	0b	–	–	×
Cerithium ducosae		0+	–	–	–	–	–
Cerithium fallax	*Hemicerithium fallax* (Grateloup)	×	–	–	–	–	×
Cerithium gallicum	*Clava* (*Semivertagus*) *gallicum* (Mayer)	–	a	–	–	–	–
Cerithium girondicum	*Potamides girondicus* (Mayer)	ad	b	–	×	–	×
Cerithium guillaudi		0	–	–	–	–	–
Cerithium lamarcki	*Potamides girondicus* (Mayer)	×	–	–	+	–	–
Cerithium (P) lignitarum	*Terebralia lignitarum* (Eichwald)	c	+a	a	–	–	–
Cerithium margaritaceum	*Tympanotonos margaritaceum* (Brocchi) (s.l.)	d	ab	–	×	–	×
Cerithium minutum	? *Vulgocerithium raulini* (Grateloup) (s.l.)	×	–	–	–	–	×
Cerithium montesqui (*eni*)		0	–	–	–	–	–
Cerithium muricinum		0+	–	–	–	–	–
Cerithium papaveraceum	*Potamides* (*Ptychoptamides*) *papaveraceum* (Basterot)	a	a	–	–	–	×
Cerithium pethioni		0+	–	–	–	–	–
Cerithium pictum	*Pirenella picta* (Defrance, in Basterot)	+b	–	b	–	–	×
Cerithium plicatulum		–	–	–	–	–	0
Cerithium plicatum	*Pirenella plicata* (Bruguiere)	b	b	b	×	–	–
Cerithium praeadolium		–	0+a	–	–	–	–
Cerithium pseudobeliscus	*Telescopium pseudobeliscus* (Grateloup)	–	–	–	–	–	×
Cerithium pseudo-tiara	*Pirenella picta* (Defrance, in Basterot) *pseudotiara* (d'Orbigny)	×	×	–	–	–	×
Cerithium pupiforme	*Clava* (*Semivertagus*) *pupaeforme* (Basterot)	–	–	–	–	–	×
Cerithium salmo	*Ptychocerithium salmo* (Basterot)	–	+a	+b	–	–	×
Cerithium subcorrugatum	*Terebralia subcorrugata* (d'Orbigny) (s.l.)	abcd	a	a	–	–	×
Cerithium sublaevigatum		0+	–	–	–	–	–
Cerithium tournoueri	*Potamides tournoueri* (Mayer)	–	–	–	×	–	×
Cerithium trilineata Phil.	? *Seila turritissima* (Sacco)	–	+a	–	–	–	–
Clavatula deleta	? *Perrona detecta* (Desmoulins)	+	–	–	–	–	–
Columbella corrugata	*Anachis terebralis* (Grateloup)	–	+a	–	–	–	×
Columbella gümbeli		–	0	–	–	–	–
Columbella rissoiformis	*Anachis rissoides* (Grateloup)	–	+	–	–	–	–
Columbella rissoioides	*Anachis rissoides* (Grateloup)	–	×	–	–	–	×
Columbella scripta	? *Mitrella merignacensis* Peyrot	+	a	–	–	–	×
Columbella tournoueri	*Mitrella tournoueri* (Benoist)	+b	–	–	–	–	–

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Conus aquitanicus	*Conus* (*Conilithes*) *subturritus* d'Orbigny	+c	+a	–	–	–	–
Conus basteroti	*Conus* (*Chelyconus*) *basteroti* Mayer	–	+b	–	–	–	–
Conus canaliculatus	*Conus* (*Conilithes*) *dujardini* Deshayes	+	+b	–	–	–	–
Conus gallicus	*Conus* (*Chelyconus*) *gallicus* Mayer	–	+a	–	–	–	–
Conus graniferus	?*Hemiconus granulifer* (Grateloup)	–	+a	–	–	–	–
Conus granuliferus	*Hemiconus granulifer* (Grateloup)	+a	–	–	–	–	–
Conus loroisi Pereira		–	0+a	–	–	–	–
Conus mercati Broc. var. *brevis*	?*Conus* (*Lithoconus*) *mercati* Brocchi var. *vasconiensis* of Peyrot	–	–	–	–	–	×
Crepidula cochlearis	*Crepidula* (*Crypta*) *gibbosa* Defrance mut. *cochlearis* (Basterot)	–	–	–	–	–	×
Crepidula italica	?*Crepidula gibbosa* Defrance mut. *cochlearis* (Basterot)	–	+	–	–	–	–
Crepidula italica Defr.= *cochlearis* Basterot	?*Crepidula gibbosa* Defrance mut. *cochlearis* (Basterot)	+	–	–	–	–	–
Erato laevis	*Erato* (*Eratopsis*?) *subcypraeola* d'Orbigny	–	+	–	–	–	×
Eulima eichwaldi	*Melanella* (*Polygireulima*) *eichwaldi* (Hoernes)	–	–	b	–	–	–
Eulima subulata	*Strombiformis burdigalina* (Benoist)	–	+	–	–	–	×
Euthria adunca Bron. var. *gallica*		–	0+	–	–	–	–
Fasciolaria burdigalensis	*Euthriofusus burdigalensis* Defrance	–	+	–	–	–	–
Fasciolaria jouanneti	*Fasciolaria jouanneti* Mayer	–	+	–	–	–	×
Fasciolaria tarbelliana	*Pleuroploca tarbelliana* (Grateloup) (s.l.)	–	+	–	–	–	×
Ficula burdigalensis	*Ficopsis* (*Fulguroficus*) *burdigalensis* (Sowerby)	+d	a	–	–	–	–
Ficula condita	*Ficus conditus* (Brongniart)	cd	–	–	–	–	–
Ficula ficoides	*Ficus conditus* (Brongniart)	+	–	–	–	–	–
Fissurella clypeata	*Pupillaea clypeata* (Grateloup) (s.l.)	×	–	–	–	–	×
Fissurella graeca Linne	?*Diodora* (?) *subcostaria* (d'Orbigny)	–	+a	–	–	–	–
Fissurella italica	*Diodora* (?) *subcostaria* (d'Orbigny)	–	–	–	–	–	×
Fusus burdigalensis	*Euthriofusus burdigalensis* (Defrance)	–	–	–	–	–	×
Fusus gallicus		–	–	–	–	–	0
Fusus intermedius		–	–	–	–	–	0
Fusus valenciennesi	?*Streptochetus* (?) *dispar* Cossmann et Peyrot	–	–	–	–	–	+
Limnaeus girondicus var.	*Lymnaea girondica* (Noulet) var.	+bcd	–	–	–	–	–
Limnaeus nouleti		0+e	–	–	–	–	–

MAYER's name	Suggested modern taxon	I	II	3	4	5	6
Limnaeus pachygaster	*Lymnaea pachygaster* Thomae	–	+b	–	–	–	–
Limnaeus substagnalis Benoist, in let.	*Lymnaea subovata* (Hartmann)	+	–	–	–	–	–
Mangilia avitensis M.-E.		0+b	0+a	–	–	–	–
Marginella miliacea	*Gibberula miliaria* (Linne)	–	a	b	–	–	×
Marginella ovulata	*Gibberula subovulata* (d'Orbigny)	–	+a	–	–	–	–
Melanopsis aquensis	*Melanopsis aquensis* Grateloup	+c	–	–	–	–	–
Modulus mechanicus		–	–	–	–	–	0
Monodonta aaronis	*Clanculus* (*Clanculopsis*) *araonis* (Basterot)	–	–	–	–	–	×
Monodonta pedronii		–	0+	–	–	–	–
Monodonta sallesi		–	–	–	–	–	0
Murex brongniarti		–	0+a	–	–	–	–
Murex coelatus Grat. *lavatus*	*Ocinebrina excoelata* (Cossmann et Peyrot)	–	×	–	–	–	–
Murex delbosi	*Pterynotus* (*Pterochelus*) *delbosianus* (Grateloup)	–	+a	–	–	–	–
Murex imperialis		–	0+a	–	–	–	–
Murex lamothei		–	–	–	–	–	0+
Murex lassaignei	*Tritonalia lassaignei* (Basterot)	d	+a	–	–	–	+
Murex (*Vit.*) *lingue-bovis*	*Vitularia lingua-bovis* (Basterot)	–	+	–	–	–	–
Murex plicatus		–	–	–	–	–	0+
Murex rudis	?"*Murex*" *rudis* Borson	0a	–	–	–	–	–
Murex subimbricatus		–	–	–	–	–	0+
Nassa (*Cyl.*) *baccata*	*Cyllene* (*Cyllenina*) *baccata* (Basterot)	–	a	–	–	–	–
Nassa (*Cyl.*) *burdigalensis*		0+b	0ad	–	–	–	–
Nassa (*Cyl.*) *constans* M.-E. var.		–	0+a	–	–	–	–
Nassa (*Cyl.*) *devexa*		–	0a	–	–	–	–
Nassa (*Cyl.*) *gallicula*		0+c	0+	–	–	–	–
Nassa (*Cyl.*) *gallicula* var. *terebrina*	?*Cyllene* (*Cyllenina*) *ignorata* Cossmann et Peyrot	–	+a	–	–	–	–
Nassa (*Cyl.*) *haueri*	?*Cyllene* (*Cyllenina*) *vulgatissima* Cossmann et Peyrot	+ab	–	–	–	–	–
Nassa (*Cyl.*) *haueri* Micht. var. *ovulata* Bell.	?*Cyllene* (*Cyllenina*) *vulgatissima* Cossmann et Peyrot	–	+a	–	–	–	–
Nassa (*Cyl.*) *lyrata* Lamk. var.=*desnoyersi* Bast.	*Cyllene desnoyersi* (Basterot)	–	+a	–	–	–	–
Nassa (*Cyl.*) *rusticana* M.-E.		–	0+a	–	–	–	–
Nassa (*Cyl.*) *sororcula* M.-E.		–	0+a	–	–	–	–
Nassa turbinellus	*Hinia turbinella* (Brocchi)	+c	–	–	–	–	–
Nassa (*Cyl.*) *veneris*	*Dorsanum veneris* (Faujas)	–	+a	–	–	–	–
Natica catena	?*Euspira varians* (Dujardin) *meridionalis* (Cossmann et Peyrot)	+b	–	–	–	–	–
Natica depressa		–	0+b	–	–	–	–
Natica eburnoides	*Ampullospira eburnoides* (Grateloup)	–	–	–	–	–	×
Natica helicina	*Euspira helicina* (Brocchi)	×	–	b	–	–	×
Natica josephinae	*Neverita olla* (de Serres)	×	–	–	–	–	–

MAYER's name	Suggested modern taxon	I	II	3	4	5	6
Natica neglecta	*Natica* (*Cochlis*) *neglecta* Mayer-Eymar	×	+a	b	–	–	×
Natica saucatsensis	*Natica* (*Cochlis*) *saucatsensis* Mayer-Eymar	–	–	b	–	–	–
Natica tigrina	*Natica* (*Cochlis*) *tigrina* Defrance	–	–	b	–	–	–
Natica tigrina Defrance – *multipunctata* Wood.	*Natica* (*Cochlis*) *tigrina* Defrance	–	–	a	–	–	–
Nerita neritina		–	0+	–	–	–	–
Nerita picta	*Neritina picta* Ferussac.	abc	ab	–	–	–	
Nerita plutonis	*Nerita* (*Theliostyla*) *plutonis* Basterot	+	–	–	–	–	×
Oliva clavula	*Olivella* (*Lamprodoma*) *clavula* (Lamarck)	+	–	ab	–	–	×
Oliva flammulata	?*Oliva* (*Neocylindrus*) *dufresnei* Basterot	+	–	b	–	–	–
Oliva grateloupi	*Olivella grateloupi* d'Orbigny	+	–	–	–	–	×
Oliva hiatula	*Olivancillaria* (*Agaronia*) *plicaria* (Lamarck)	×	–	–	–	–	–
Oliva hiatula Lamk. – *plicaria* Lamk.	*Olivancillaria* (*Agaronia*) *plicaria* (Lamarck)	–	–	–	–	–	×
Phasianella pullus	*Tricolia subpulla* (d'Orbigny)	–	a	b	–	–	×
Pirula cornuta	*Volema* (*Melongena*) *cornuta* (Agassiz)	+d	a	–	–	–	–
Pirula lainei	*Volema* (*Melongena*) *lainei* (Basterot)	ac	a	–	–	–	–
Pirula rustica	*Tudicla rusticula* (Basterot)	cd	–	–	–	–	–
Pisania neglecta Micht.	*Pisania neglecta* Michelotti	–	0+	–	–	–	–
Pleurotoma concentenata Bell. non Grat.	*Clavatula sp.*	–	–	–	–	–	×
Pleurotoma concatenula		0	–	–	–	–	–
Pleurotama crispata	*Asthenotome* (?) *crispata* (Jan)	–	–	b	–	–	×
Pleurotoma depiotina		–	–	–	–	–	0+
Pleurotoma detecta	*Perrona detecta* (Desmoulins)	–	–	b	–	–	–
Pleurotoma ellisae		–	–	–	–	–	0+
Pleurotoma (*Cl.*) *evoluta*	"*Clavatula*" *evoluta* (Mayer)	–	+	–	–	–	–
Pleurotoma gradata	?*Perrona gradata* (Defrance)	–	+b	b	–	–	–
Pleurotoma gradata Def. non Hoernes	*Perrona* sp.	–	–	–	–	–	×
Pleurotoma harpula		–	–	0+b	–	–	–
Pleurotoma innexa		0	–	–	–	–	0
Pleurotoma intermedia	*Turris aquensis* (Grateloup)	–	+a	–	–	–	×
Pleurotoma interrupta	?*Clavatula pseudinterrupta* (Peyrot)	×	+	–	–	–	×
Pleurotoma interrupta var. *italica*		–	–	–	–	–	0+
Pleurotoma jouanneti	*Perrona jouanneti* (Desmoulins)	–	–	+b	–	–	×
Pleurotoma obtusangula	?*Raphitoma* (Auct.) *mutabilis* (Mayer)	–	–	–	–	–	+
Pleurotoma obtusangula var. *saucatsensis* Mayer	?*Raphitoma* (Auct.) *mutabilis* (Mayer) var.	–	–	–	–	–	+
Pleurotoma plicatella	?*Raphitoma* (Auct.) *aquitanensis* (Peyrot)	–	–	+b	–	–	–
Pleurotoma pulchella		0+	–	0+b	–	–	–

MAYER's name	Suggested modern taxon	I	II	3	4	5	6
Pleurotoma pustula(ata)	?*Crassispira pustulata* (Brocchi)	–	–	–	–	–	+
Pleurotoma rusticana		0+	–	–	–	–	0+
Pleurotoma scalaris		0	–	–	–	–	–
Pleurotoma similis	*Perrona semimarginata* (Lamarck)	+c	–	–	–	–	–
Pleurotoma strombillus	?*Glyphostoma perrisi* (Basterot, in Peyrot)	–	–	b	–	–	×
Pleurotoma submarginata	?*Raphitoma* (Auct.) *notabilis* (Peyrot) var. *perstriata* Peyrot	–	–	+b	–	–	–
Pleurotoma terebra	*Crassispira terebra* (Basterot)	–	–	b	–	–	×
Purpura calcarata	*Cymia calcarata* (Grateloup)	–	+a	–	–	–	–
Purpura elongata		–	0+a	–	–	–	–
Pyramidella mitrula	*Otopleura mitrula* (Ferussac)	–	–	–	×	–	×
Pyramidella plicosa	*Plotia plicosa* (Bronn)	–	+a	–	–	–	–
Pyramidella terebellata	*Plotia grateloupi* (d'Orbigny)	–	+	–	–	–	–
Pyramidella unisulcatus	*Plotia unisulcata* (Dujardin)	–	–	b	–	–	×
Ranella papillosa		–	–	–	–	–	0
Rissoia curta	*Alvania curta* (Dujardin)	–	–	–	–	–	+
Rissoia dubia Lamk. – *varicosa* Defr.	?*Alaba costellata* (Grateloup) *varicosa* (Basterot)	–	–	–	–	–	+
Rissoia lachesis	*Alvania curta* (Dujardin) *lachesis* (Basterot)	–	–	–	–	–	+
Rissoia lamellosa	*Rissoina bistriata* (Grateloup)	+	–	–	–	–	–
Rissoia moulinsi	*Rissoina* (*Zebinella*) *subcancellata* (Grateloup)	+	–	–	–	–	+
Rissoia venus	*Alvania venus* (d'Orbigny)	+	–	–	–	–	+
Rissoina bruguieri	*Rissoina exdecussata* Sacco	–	–	–	–	–	+
Rissoina decussata	*Rissoina* (*Zebinella*) *decussata* (Montagu)	–	–	–	–	–	+
Rissoina grateloupi	*Rissoina* (*Rissolina*) *grateloupi* (Basterot)	–	–	–	–	–	+
Rissoina lamellosa	*Rissoina bistriata* (Grateloup)	+	–	–	–	–	+
Rissoina planaxoides	*Stossichia planaxoides* (Desmoulins) (s.l.)	–	–	–	–	–	×
Rostellaria dentata	*Tibia dentata* (Grateloup)	–	a	–	–	–	–
Scalaria billaudeli	*Opalia* (*Dentiscala*) *billaudeli* (Mayer)	–	–	–	–	–	+
Scalaria lamellosa	?*Cirsotrema fontannesi* de Boury, in Cossmann et Peyrot.	+a	–	–	–	–	–
Scalaria multilamella	*Acrilla multilamella* (Basterot)	–	–	b	–	–	–
Scalaria terebralis	*Scala* (*Fuscoscala*) *falloti* (de Boury, in Cossmann et Peyrot)	–	–	b	–	–	–
Serpulorbis arenarius	*Lemintina arenaria* (Linne) (s.l.)	–	–	–	–	–	×
Serpulorbis craspedotus		0	–	–	–	–	–
Sigaretus clathratus		–	0+a	0+b	–	–	0
Sigaretus suturalis	*Sinum* (*Sigaretotrema*) *striatellum* (Grateloup)	–	–	–	–	–	+
Strombus bonellii	*Canarium bonellii* (Brongniart)	–	ab	–	–	–	–
Strombus decussatus	*Dientomochilus* (*Varicospira*) *decussatus* (Defrance, in Basterot)	a	–	–	–	–	–
Terebra basteroti	*Strioterebrum basteroti* (Nyst)	–	–	+b	–	–	×
Terebra cinerea	*Hastula subcinerea* (d'Orbigny)	–	–	–	–	–	×
Terebra fuscata	*Subula fuscata* (Brocchi)	–	–	+b	–	–	×

MAYER's name	Suggested modern taxon	I	II	3	4	5	6
Terebra pertusa	*Duplicaria pseudopertusa* (Peyrot)	–	–	–	–	–	×
Tornatella papyraceus	*Kleinella* (*Actaeopyramis*) *papyracea* (Basterot)	–	–	–	–	–	×
Tornatella tournoueri	? *Ringicula* (*Ringiculella*) *tournoueri* Morlet	–	–	–	–	–	×
Triforis perversa	? *Triphora adversa* (Montagu) mut. *miocaenica* Cossmann et Peyrot	–	×	–	–	–	–
Triton (*Ep.*) *clathratus*	*Distorsio tortuosa* (Borson)	–	+a	–	–	–	–
Tritonium affine	*Lampusia subcorrugatum* (d'Orbigny)/*L. aquitanicum* (Cossmann et Peyrot)	–	–	–	–	–	×
Tritonium parvulum	? *Sassia tritoneum* (Grateloup)	–	–	–	–	–	×
Trochus collegnoi		–	–	–	–	–	0
Trpchus miliaris	*Jujubinus* (*Strigosella*) cf. *miliare* (Brocchi)	+c	+	–	–	–	×
Trochus moussoni	*Gibbula* (*Colliculus*) *moussoni* (Mayer)	–	–	–	–	–	×
Trochus oxycrepis		–	0	–	–	–	–
Trochus patulus	*Oxystele burdigalensis* Cossmann et Peyrot	–	×	–	–	–	×
Trochus sannio		–	–	–	–	–	0
Trochus subturgidulus	*Jujubinus* (*Strigosella*) *subturgidulum* (d'Orbigny)	–	×	b	–	–	×
Trochus subturgidulus var. *sulcata*	*Jujubinus* (*Strigosella*) *subturgidulum* (d'Orbigny) (s.l.)	–	–	–	–	–	×
Turbinella coarctata	*Latirus* (*Lathyrulus*) *coarctatus* (Michelotti)	–	–	–	–	–	×
Turbinella pleurotoma	*Taurasia pelurotoma* (Grateloup)	–	–	–	–	–	+
Turbo elegans		0	–	–	–	–	–
Turbonilla acicula	*Syrnola subacicula* (d'Orbigny)	–	–	b	–	–	×
Turbonilla bulimoides	*Odostomia bulimoides* (Grateloup)	–	–	b	–	–	–
Turbonilla coartata Micht.		–	0	–	–	–	–
Turbonilla ducosae		–	–	0	–	–	0
Turbonilla eugeniae		–	–	0b	–	–	–
Turbonilla gracilis	*Turbonilla cylindroides* Degrange-Touzin	–	–	+b	–	–	–
Turbonilla subumbilicata	*Syrnola subumbilicata* (Grateloup)	–	–	b	–	–	–
Turbonilla varians		–	–	0b	–	–	–
Turritella aquitanica	*Turritella* (*Haustator*) *venus* d'Orbigny	×	–	–	–	–	–
Turritella bazadensis		0	–	–	–	–	–
Turritella bistriata Grat. *sororcula* Mayer	*Protoma obeliscus* (Grateloup) (s.l.)	–	–	–	–	–	×
Turritella cathedralis	*Protoma cathedralis* (Brongniart)	b	–	×	×	–	×
Turritella desmaresti(*na*)	*Turritella* (*Peyrotia*) *desmarestina* Basterot	×	–	b	–	–	–
Turritella diversicostata Stein (var. of *cathedralis*)	*Protoma cathedralis* (Brongniart) (s.l.)	–	–	–	–	–	×
Turritella gradata	? *Turitella gradata* Menke	×	–	–	–	–	–

Mayer's name	Suggested modern taxon	I	II	3	4	5	6
Turritella terebralis	*Turritella terebralis* Lamarck	–	+	×	×	–	×
Turritella terebralis var. = *gradata*	? *Turritella gradata* Menke	–	–	–	×	–	–
Turritella turris	*Turritella* (*Haustator*) *turris* Basterot	–	–	+	–	–	+
Turritella turris var. *aquitanica*	? *Turritella* (*Haustator*) *venus* d'Orbigny	×	–	–	–	–	–
Vaginella depressa	*Vaginella depressa* Daudin	×	–	–	–	–	×
Vermetus arenarius	*Lemintina arenaria* (Linne) (s.l.)	+b	–	–	–	–	×
Vermetus craspedotus		–	–	–	–	–	0
Vermetus intortus	*Petaloconchus intortus* (Lamarck)	×	–	–	–	–	×
Vermetus subcarinatus		0b	–	–	–	–	–
Voluta decora Beyrich – *subcostata* d'Orbigny	? *Lyria subcostata*	×	–	–	–	–	–
Voluta magorum		0+a	–	–	–	–	–
Anomia ephippium	*Anomia ephippium* Linne var. *rugulosostriata* Brocchi	–	+ab	–	–	–	–
Arca aquitanica	*Anadara* (*Scapharca*) *aquitanica* (Mayer)	bce	a	–	–	–	–
Arca barbata	*Barbatia barbata* (Linne)	+a	a	+	–	–	–
Arca cardiiformis	*Anadara cardiiformis* (Basterot)	+bcd	ab	–	–	–	–
Arca cardiiformis var.	*Anadara cardiiformis* (Basterot) var.	+a	–	–	–	–	–
Arca clathrata	*Acar clathrata* (Defrance)	–	ab	–	–	–	–
Arca girondica	*Anadara girondica* (Mayer)	+b	a	–	–	–	–
Arcu gümbeli		0	–	–	–	–	–
Arca imbricata	? *Acar clathrata* (Defrance)	+abc	ab	–	–	–	–
Arca lactea	*Striarca miocaenica* (Cossmann et Peyrot)	+b	a	–	–	–	–
Arca noeae	*Arca biangulina* d'Orbigny	–	a	–	–	–	–
Arca polymorpha	*Obliquarca polymorpha* (Mayer)	–	a	–	–	–	–
Arca scabrosa	*Barbatia bohemica* (Reuss)	–	a	–	–	–	–
Arca variabilis	*Barbatia sub-helbingi* (d'Orbigny) var. *variabilis* (Mayer)	+ad	a	–	–	–	–
Avicula phalaenacea	*Pteria phalaenacea* (Lamarck)	+	–	–	+	–	–
Cardita ajar		–	0+ab	–	–	–	–
Cardita crassa	*Cardita crassa* Lamarck	–	–	–	–	–	+
Cardita crassicosta	*Cardita crassa* Lamarck	–	–	–	–	–	+
Cardita crassicosta Lamk. var. = *puella* Mayer		–	–	–	0+	–	–
Cardita hippopaea	*Glans* (*Lazariella*) *hippopaea* (Basterot) (s.l.)	–	ab	–	–	–	–
Cardita rusticana	*Cardita rusticana* Mayer	–	–	–	–	–	+
Cardita unidentata	*Venericardia* (*Pteromeris*) *unidentata* Basterot	–	–	–	–	–	+
Cardita uzetensis		0	–	–	–	–	–
Cardium anomale Math. = *aquitanicum* Mayer	*Discors aquitanicus* (Mayer)	–	–	–	–	–	×

MAYER's name	Suggested modern taxon	I	II	3	4	5	6
Cardium burdigalinum	*Cardium* (*Bucardium*) *burdigalinum* Lamarck	c	–	b	–	–	×
Cardium cingulatum		0	–	–	–	–	–
Cardium grateloupi	*Cardium* (*Bucardium*) *grateloupi* Mayer	–	+a	–	–	–	–
Cardium lyratum	?"*Cardium*" *lyratum* Sowerby	–	0a	–	–	–	–
Cardium multicostatum	*Trachycardium* (?) *polycolpatum* (Cossmann et Peyrot)	–	–	–	–	×	×
Cardium pallasanum var. *juven*	*Trachycardium* (?) *pallasianum* (Basterot)	+	–	–	–	–	–
Cardium papillosum	?*Cerastoderma* (*Parvicardium*) *benoisti* (Cossmann)	–	–	–	–	–	+
Cardium pectinatum Lin. = *aquitanicum* Mayer	*Discors aquitanicus* (Mayer)	+d	–	–	–	–	–
Cardium praecedens		–	–	–	–	0	–
Cardium variabile		–	0	–	–	–	–
Carteria mitis	*Eastonia mitis* Mayer	a	a	–	–	–	–
Chama gryphoides	?*Chama gryphoides* Linne	–	+a	–	–	–	+
Clavagella acurta Sow.	?*Clavagella aperta* Sowerby	–	0+a	–	–	–	–
Circe banoni	*Circe banoni* Tournouer	×	–	–	–	–	–
Clotho unguiformis	*Ungulina unguiformis* (Basterot)	–	–	–	–	–	×
Corbula carinata	*Corbula carinata* Dujardin	+acd	–	b	–	–	×
Corbula tournoueri	*Lentidium tournoueri* (Mayer)	–	+a	–	–	–	–
Cypricardia saucatsensis Mayer		–	–	–	–	–	0+
Cyrena brongniarti	*Cyrena brongniarti* Basterot	acde	ab	–	–	–	–
Cytherea albina		0c	–	0b	–	–	0
Cytherea deshayesana	*Gouldia deshayesiana* (Basterot)	+d	–	–	×	–	×
Cytherea erycina	*Chionella* (*Costacallista*) *erycinoides* (Lamarck)	–	–	b	–	–	×
Cytherea lamarcki	*Pitar lamarcki* (Agassiz)	–	–	b	–	–	-
Cytherea paulina	*Tivelina paulinae* (Mayer)	–	–	–	–	–	×
Cytherea undata	*Pitar undata* (Basterot)	abcde	ab	×	–	–	×
Diplodonta unguiformis	*Ungulina unguiformis* (Basterot)	–	–	+	–	–	+
Donax elongatus	*Donax affinis* Deshayes	×	–	b	–	–	×
Donax gibbosus	?*Donax* (*Paradonax*) *gibbosula* Mayer	–	×	–	–	–	–
Donax transversa	*Donax* (*Paradonax*) *transversa* Deshayes	+b	–	–	–	–	–
Donax transversus	*Donax* (*Paradonax*) *transversa* Deshayes	–	a	–	–	–	–
Dosinia adansoni	*Dosinia lupinus* (Linne)	–	–	b	–	–	×
Dosinia orbicularis		–	–	–	–	–	0
Eastonia mitis	*Eastonia mitis* Mayer	+a	ab	–	–	–	–
Erycina ambigua		0	–	–	–	–	–
Gastrochaena dubia	*Gastrochaena dubia* (Pennant)	–	–	–	–	–	×
Gastrochaena intermedia	*Gastrochaena intermedia* Hoernes (s.l.)	–	–	–	×	–	–
Grateloupia difficulis	*Grateloupia difficilis* (Basterot)	×	–	b	–	–	×
Grateloupia irregularis	*Grateloupia irregularis* (Basterot)	–	–	–	–	–	×
Grateloupia triangularis	*Tivela triangularis* (Basterot)	–	–	–	–	–	×

Mayer's name	Suggested modern taxon	I	II	3	4	5	6
Leda pella		0+	–	–	–	–	–
Lima hians	?*Lima* (*Promantellum*) *muticum* Lamarck mut. *neogenica* Cossmann et Peyrot	–	–	–	–	–	+
Lithodomus avitensis		–	–	–	–	–	0+
Lithodomus cinnamomeus		–	–	–	–	–	0+
Lithodomus saucatsensis	*Lithophaga saucatsensis* (Mayer)	–	–	–	–	–	+
Lucina aquitanica	*Miltha trigonula* (Deshayes)	–	–	–	+	–	–
Lucina columbella	*Lucina columbella* Lamarck	×	+a	b	–	–	×
Lucina dentata	*Loripes* (*Microloripes*) *neglectus* (Basterot)	+a	–	b	–	–	–
Lucina fulminifera		0+	–	–	–	–	–
Lucina incrassata	*Megaxinus inctassatus* (Dubois)	d	+ab	–	–	–	–
Lucina inornata		0+	–	–	–	–	–
Lucina leonensis	?*Codakia leonina* (Basterot)	+b	–	–	–	–	–
Lucina leonina Bast. et var. = *punctata* Desh.	*Codakia leonina* (Basterot) (s.l.)	–	–	+	–	–	–
Lucina michelottii	*Phacoides michelottii* (Mayer)	–	–	–	–	–	+
Lucina multilamella	*Ventricoloidea multilamella* (Lamarck)	×	×	–	--	–	–
Lucina ornata	*Divalinga ornata* (Agassiz)	+	×	+	+	–	+
Lucina ornata Ag. var.	*Divalinga ornata* (Agassiz) var.	+c	–	–	–	–	–
Lucina pecten Lamk. = *leonina* Bast.	*Codakia leonina* (Basterot)	–	–	–	–	–	+
Lucina pomum	*Anodontia globulosa* (Deshayes)	×	–	–	–	–	–
Lucina profunda		0+c	–	–	–	–	0+
Lucina scopulorum	*Megaxinus incrassatus* (Dubois) *subscopulorum* (d'Orbigny)	–	–	–	–	–	+
Lucina spinifera	*Myrtea spinifera* (Montagu)	–	–	–	–	–	+
Lucina tumida		0+c	–	–	–	–	–
Lutraria angusta	*Lutraria angusta* Deshayes	ad	ab	–	–	–	–
Lutraria latissima	*Lutraria latissima* Deshayes	c +a	–	–	–	–	–
Lutraria sanna	*Lutraria sanna* Basterot	abcd	a	–	–	–	–
Mactra basteroti	*Mactra* (*Eomactra*) *basteroti* Mayer	abcd	ab	–	–	–	–
Mactra cordiformis		0bc	–	–	–	–	–
Mactra striatella	*Mactra* (*Barymactra*) *substriatella* (d'Orbigny)	b	+a	–	–	–	–
Mactra triangula	*Spisula laevigata* (Defrance)	ab	–	–	–	–	–
Modiola barbata	?*Modiolus barbatus* (Linne)	0	C	–	0+	–	–
Modiola escheri		–	–	0+	–	–	–
Modiola philippii		–	–	0+	–	–	–
Modiolus barbatus	?*Modiolus barbatus* (Linne)	–	+	–	–	–	–
Mytilus aquitanicus	*Mytilus aquitanicus* Mayer	+ad	+	+b	+	+	+
Mytilus oblitus Micht.	?*Septifer saccoi* Cossmann et Peyrot	–	–	–	+	–	–
Ostrea neglecta	*Liostrea* (*Ostreinella*) *neglecta* (Michelotti)	×	–	–	–	–	–
Panopeae intermedia		0c	–	–	–	–	–
Panopea rediviva	*Panope rediviva* (Mayer, in Cossmann et Peyrot)	–	+a	–	–	–	–

Mayer's name	Suggested modern taxon	I	II	3	4	5	6
Pecten opercularis	?*Chlamys* (*Aequipecten*) *opercularis* (Linne)	–	–	–	–	–	+
Pectunculus aquitanicus		–	0a	–	–	–	–
Pectunculus glycymeris	*Glycymeris inflatus* (Brocchi)	–	×	–	–	–	–
Pectunculus insubricus		–	–	0	–	–	–
Pectunculus stellatus	*Glycymeris pilosus* (Brocchi)	–	–	–	–	–	×
Pectunculus violaceus		0c	–	–	–	–	–
Pectunculus violescens (*eus*)		–	0	–	–	–	–
Perna sandbergeri	*Perna burdigalensis* Cossmann et Peyrot	–	×	–	–	–	–
Pinna brocchii	?*Atrina basteroti* Cossmann et Peyrot	–	a	–	–	–	–
Plicatula ruperella	*Plicatula ruperella* Dujardin	–	–	–	–	–	+
Psammobia aquitanica	*Gari* (*Psammocola*) *aquitanica* (Mayer)	c	–	–	–	–	–
Psammobia bavarica Mayer		0+d	–	–	–	–	–
Psammobia bavarica var. *aequilatera*		0+d	–	–	–	–	–
Psammobia ferroensis Chemn.	*Gari feroensis* (Lamarck)	–	+	–	–	–	–
Psammobia labordei	*Gari* (*Psammocola*) *labordei* (Basterot)	–	b	–	–	–	×
Saxicava aretica	*Hiatula arctica* (Linne)	–	×	–	–	–	–
Spondylus miocaenicus		–	–	–	–	–	0+
Syndosmya apelina		0	–	–	–	–	–
Syndosmya rolandae	*Abra rolandae* (Mayer)	+	–	–	–	–	–
Tapes vetula	*Paphia* (*Callistotapes*) *vetula* (Basterot)	–	–	b	–	–	×
Tellina aquitanica	*Tellina* (*Peronaea*) *aquitanica* Mayer	–	–	b	–	–	–
Tellina bipartita	*Tellina* (*Peronidia*) *bipartita* Basterot	–	–	b	–	–	–
Tellina depressa		–	–	–	–	–	0
Tellina lacunosa	*Apolymetis tumida* (Brocchi)	+c	a	–	–	–	×
Tellina petiosa Eichwald		0+c	–	–	–	–	–
Tellina planata	*Tellina* (*Peronaea*) *planata* Linne	–	+ab	bd	–	–	×
Tellina planata var. *misera*	*Tellina* (*Peronaea*) *planata* Linne var.	–	–	–	–	–	×
Tellina preciosa var. *incarnata*		–	–	0b	–	–	–
Thracia lacunosa		–	0a	–	–	–	–
Thracia papyracea	?*Thracia attenuata* Cossmann et Peyrot	–	+a	–	–	–	–
Thracia plicata	?*Thracia plicata* Deshayes	0+c	–	0b	–	–	–
Thracia pubescens	?*Thracia* (*Cyathodonta*) *pubescens* (Pulteney)	–	+a	–	–	–	–
Venerupis decussata		–	0	–	–	–	0
Venus aglaurae	*Periglypta granosa* (J. de C. Sowerby)	×	×	–	–	–	–
Venus arata		0+d	–	–	–	–	–

Mayer's name	Suggested modern taxon	I	II	3	4	5	6
Venus casinoides	*Clausinella casinoides* (Basterot)	–	–	–	–	–	×
Venus deshayesi	*Gouldia deshayesiana* (Basterot)	–	+ab	–	–	–	–
Venus girondica		–	–	–	–	–	0
Vetula decora	?*Paphia* (*Callistotapes*) *vetula* (Basterot) (s.l.)	×	–	–	–	–	–
Dentalium burdigalinum	*Dentalium* (*Laevidentalium*) *burdigalinum* Mayer	c	–	–	–	–	×
Dentalium incrassatum		–	–	0b	–	–	–
Dentalium lamarcki	*Dentalium* (*Antalis*) *exlamarcki* (Sacco)	–	–	b	–	–	×
Dentalium parvum	*Dentalium* (*Antalis*) *parvum* Mayer	–	–	b	–	–	–
Ditrypa (*Pyrg.*) *cornea*	?*Dentalium corneum* Linne (see Sacco)	c	–	–	–	–	–
Gadus bifissus		–	–	0b	–	–	–
Nautilus aturi	*Aturia aturi* (Basterot)	–	–	–	–	–	×

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