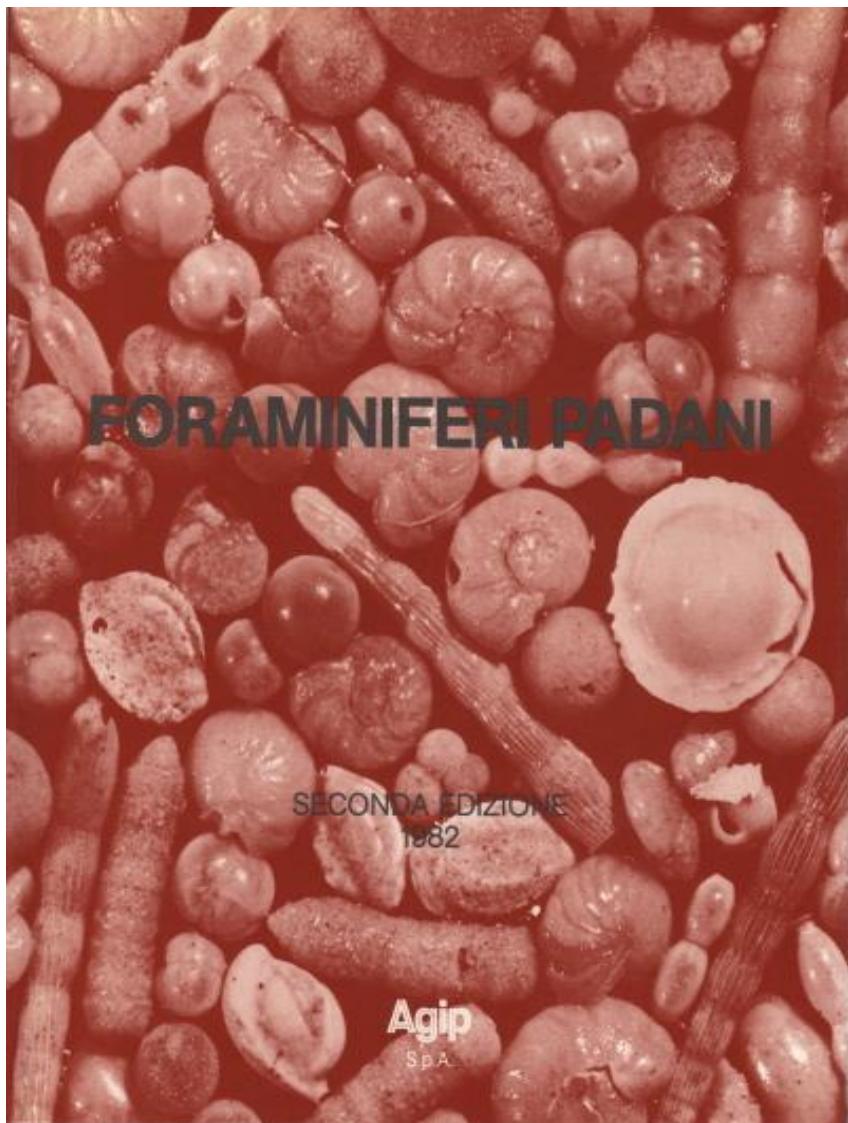


Cesare Brizio
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**«Foraminiferi Padani»
*Online edition***

MANUAL / MANUALE

**An initiative authorized by
Archivio Storico Eni, 6 November 2020**
by Cesare Brizio, November 2020



Scope of the initiative

As a former student of Micropaleontology, I got in touch with the Second Edition of Foraminiferi Padani in 1982, while preparing one of my secondary dissertation for an university degree in Earth Sciences – a discipline that I abandoned for the lack of working opportunities the very same day I got my degree.

Studying and collecting samples near Bologna, I was astonished by the completeness of the coverage of the Pliocene species that the book provided.

Upon retirement from work, I found the time to start a purely esthetical collection of foraminiferans, starting from where I left forty years before.

Even though the pictures, mostly taken in 1957 by the staff of Agip Mineraria, now look very suboptimal, I decided to prepare sort of a tribute to this unmatched book: an online edition with all the unaltered and unimproved pictures, the chronostratigraphy of each species, and a couple of references to the current taxonomy.

Most probably, professional micropaleontologists won't take advantage at all from the web pages that I prepared, but any avocational collector will appreciate the straightforwardness of the pictures, easily comparable with those obtained even with the cheapest stereomicroscope, and of a satisfactory coverage of the Italian Tertiary foraminiferal diversity – regardless of its title, the book covers 523 taxa most of which widespread in all the Italian territory.

Even though the very simple navigation tree shouldn't require a manual, for the sake of completeness the following pages will explain how to use the online edition, that I intend to extend by publishing on each taxon page new pictures of the same species, as my new collection progresses and new specimens become available.

A link to a selection of pictures of Italian species covered by the book, available on the foraminifera.eu website, is provided in the home page.

Cesare Brizio, December 2020

Ambito dell'iniziativa

In qualità di ex studente di Micropaleontologia, sono entrato in contatto con la Seconda Edizione di Foraminiferi Padani nel 1982, mentre preparavo una delle mie tesine di laurea in Scienze della Terra, disciplina che ho abbandonato per mancanza di opportunità lavorative lo stesso giorno in cui mi sono laureato.

Studiando e raccogliendo campioni vicino a Bologna, sono rimasto sbalordito dalla completezza della copertura delle specie plioceniche che il libro forniva.

Ritirandomi dal lavoro, ho trovato il tempo per avviare una raccolta puramente estetica di foraminiferi, partendo da dove avevo lasciato quarant'anni prima.

Anche se le foto, per lo più scattate nel 1957 dallo staff dell'Agip Mineraria, sembrano ora lontane dall'ottimalità, ho deciso di preparare una sorta di tributo a questo libro senza eguali: un'edizione online con tutte le immagini inalterate e non migliorate, la chronostratigrafia di ogni specie e un paio di riferimenti alla tassonomia corrente.

Molto probabilmente, i micropaleontologi di mestiere non trarranno alcun vantaggio dalle pagine web che ho preparato, ma qualsiasi collezionista non professionista apprezzerà la semplicità delle immagini, facilmente confrontabili con quelle ottenute anche con lo stereomicroscopio più economico, e la soddisfacente copertura della diversità dei Foraminiferi del Terziario italiano - indipendentemente dal titolo, il libro copre 523 taxa la maggior parte dei quali diffusi in tutto il territorio nazionale.

Anche se il semplicissimo albero di navigazione non dovrebbe richiedere un manuale, per completezza le pagine seguenti spiegheranno come utilizzare l'edizione online, che intendo estendere pubblicando sulle pagine di ogni taxon nuove immagini della stessa specie, mano a mano che la mia nuova la raccolta procede e nuovi esemplari diventano disponibili.

Nella home page è fornito un collegamento ad una selezione di immagini delle specie italiane oggetto del libro, disponibile sul sito foraminifera.eu.

Cesare Brizio, Dicembre 2020

Frome the book to the web pages

Things were kept as simple as possible: considering that the book, in actuality, doesn't contain any information about the biology of the foraminiferans, but just a bare list of specimens, localities and chronological distribution, there was no need nor way to implement the online edition with sophisticated interactivity.

Furthermore, I'm a supporter of simple HTML websites, and I devised a system to generate all the taxon pages, the alphabetical index and the thumbnail pages in a semi-automatic way, taking advantage of Excel formulas based on the original index.

Steps included:

- writing my project and submitting it to the Historical Office of ENI S.p.A. my project, with a formal request of authorization;
- signing the official form for such requests;
- obtaining a countersigned copy of the authorization;
- scanning and OCR-ing the index of the book;
- manually correcting and reconciling the index test;
- formatting the index as a table in Microsoft Word;
- implementing the table with a few special columns such as "Foraminifera.eu Species Code" and "WoRMS (2020) Species Code";
- line by line, filling those columns in a lengthy process that included searching the name in the index (and, when needed, the original name) on WoRMS (www.marinespecies.org), then querying foraminifera.eu to see whether the site includes pictures of the species;
- deriving an Excel version of the same table;
- implementing the xlsm file with special tabs and a macro for the automated generation of one HTML page for each taxon in «Foraminiferi Padani»;

Dal libro alle pagine Web

Ho tenuto le cose il più semplici possibile: considerando che il libro, in realtà, non contiene alcuna informazione sulla biologia dei foraminiferi, ma solo un nudo elenco di esemplari, località e distribuzione cronologica, non c'è stato né bisogno né modo di implementare l'edizione online con un'interattività sofisticata.

Inoltre, sono assertore dei siti web in HTML puro, e ho ideato un sistema per generare tutte le pagine dei taxa, l'indice alfabetico e le pagine delle miniature in modo semi-automatico, sfruttando alcune formule di Excel basate sull'indice originale.

Passaggi inclusi:

- redigere il mio progetto e sottoporlo alla Soprintendenza Storica di ENI S.p.A. il mio progetto, con formale richiesta di autorizzazione;
- firmare il modulo ufficiale per tali richieste;
- ottenere copia controfirmata dell'autorizzazione;
- svolgere scansione e OCR dell'indice del libro;
- correggere e riconciliare manualmente il test dell'indice;
- formattare l'indice come tabella in Microsoft Word;
- implementare la tabella con alcune colonne speciali come "Foraminifera.eu Species Code" e "WoRMS (2020) Species Code";
- riga per riga, riempire tali colonne in un lungo processo che ha compreso la ricerca del nome nell'indice (e, quando necessario, il nome originale) su WoRMS (www.marinespecies.org), quindi una ricerca su foraminifera.eu per vedere se il sito include immagini della specie;
- derivare una versione Excel della stessa tabella;
- implementare il file xlsm con appositi tab e una macro per la generazione automatizzata di una pagina HTML per ogni taxon di «Foraminiferi Padani»;

- | | |
|--|---|
| <ul style="list-style-type: none">• implementing the xlsm file with formulas to generate the clickable text index table;• implementing the xlsm file with formulas to generate the clickable thumbnails table;• deriving from the pdf copy of Foraminiferi Padani, by cutting and pasting in special jpg grayscale templates, 521 images of as many species and 521 images of their chronological distribution and frequency;• generating 521 thumbnails of the taxon image;• generating 521 html pages via the Excel macro cited above;• generating the text index table;• generating the thumbnails page;• preparing the HTML home page;• adding links to other resources (the «Foraminiferi Padani» collection on foraminifera.eu, the pdf files)• checking the links. <p>I didn't strive to achieve an aesthetically pleasing result, but rather I aimed at providing a purely functional access to the content.</p> | <ul style="list-style-type: none">• implementare il file xlsm con formule per generare la tabella dell'indice di testo cliccabile;• implementare il file xlsm con formule per generare la tabella delle miniature cliccabili;• ricavare dalla copia pdf dei Foraminiferi Padani, tagliando ed incollando in appositi template jpg in scala di grigi, 521 immagini di altrettante specie e 521 immagini della loro distribuzione cronologica e frequenza;• generare 521 miniature dell'immagine dei taxa;• generare 521 pagine html tramite la macro Excel sopra citata;• generare la tabella indice del testo;• generare la pagina delle miniature;• preparare la home page HTML;• aggiungere link ad altre risorse (la raccolta «Foraminiferi Padani» su foraminifera.eu, i file pdf) controllare i collegamenti. <p>Non ho fatto alcuno sforzo per ottenere un risultato esteticamente gradevole, ma piuttosto ho mirato a fornire un accesso puramente funzionale al contenuto.</p> |
|--|---|

Disclaimer

ENI S.p.A. is the sole owner of all the copyrights on the «Foraminiferi Padani» book and on the text and pictures there contained.

A permission to use that material for the creation of the web pages «Foraminiferi Padani Online» was formally granted by the Historical Office of ENI S.p.A. – the authorization to publish and share the pictures is limited to the domains cesarebrizio.it and foraminifera.eu.

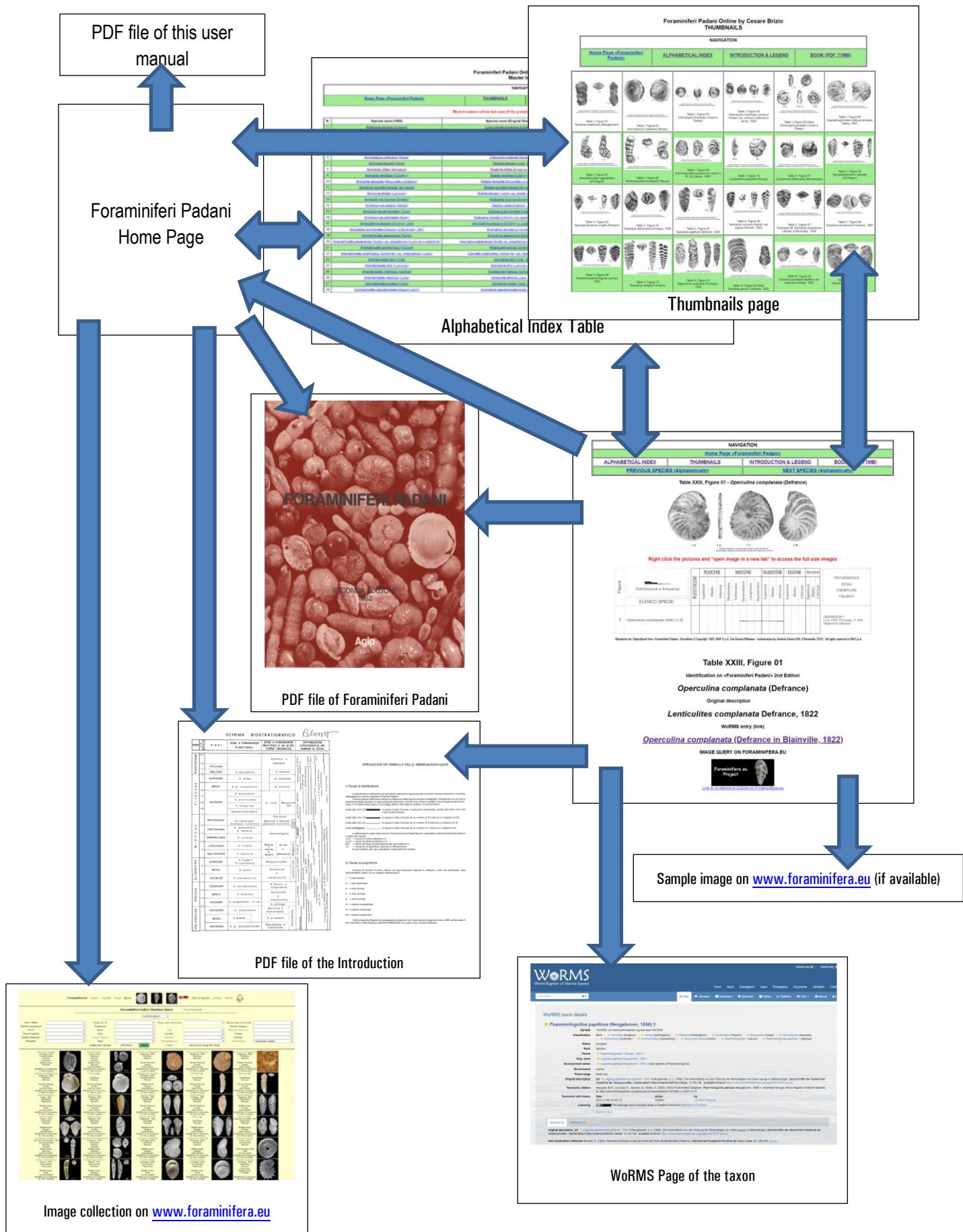
Any other use is not permitted without written authorization by the Historical Office of ENI S.p.A..

The World Register of Marine Species (WoRMS)

WoRMS (<http://www.marinespecies.org/about.php>) is the reference site for taxonomists in all the fields of marine zoology, and has been used as such in this online edition, to provide the current Linnean Binomen of each species figured in «Foraminiferi Padani».

The entries on WoRMS include the full taxonomical history of the entity considered, and allow to observe how taxonomy changed in time. Relevant literature is extensively cited on each WoRMS web page.

Overview of the navigation



Home Page

Foraminiferi Padani Online - Home Page Click on the picture in the center column to activate the links. Click sull'immagine nella colonna centrale per attivare i link.		
«Foraminiferi Padani Online» - Alphabetical Index Page		«Foraminiferi Padani Online» - Pagina Indice Alfabetico
«Foraminiferi Padani Online» - Thumbnails Index Page		«Foraminiferi Padani Online» - Pagina Indice Thumbnails
«Foraminiferi Padani» - Relevant Pictures on the foraminifera.eu website		«Foraminiferi Padani» - Immagini rilevanti sul sito web foraminifera.eu
«Foraminiferi Padani» - PDF of the whole book (71 MB)		«Foraminiferi Padani» - PDF dell'intero libro (71 MB)
«Foraminiferi Padani» - PDF of the Introduction and Legend		«Foraminiferi Padani» - PDF dell'Introduzione e Legenda
	«Foraminiferi Padani» Online edition MANUAL / MANUALE	

The center column of the home page provides one-click links to:

- The Alphabetical index Page;
- The Thumbnails Index Page;
- The link to the «Foraminiferi Padani» Collection on foraminifera.eu;
- The full book in PDF format;
- The Introduction and Legend in PDF format;
- This User Manual in PDF format.

All the links open in new tabs.

Index Table

Foraminiferi Padani Online by Cesare Brizio
 Master Index

NAVIGATION					
	Home Page «Foraminiferi Padani»	THUMBNAILS	INTRODUCTION & LEGEND	BOOK (PDF, 71MB)	
Most browsers allow text search by pressing Ctrl-F and typing some characters					
N.	Species name (1982)	Species name (Original Description)	WoRMS (2020)	Table	Fig.
1	<i>Alliatina excenrica</i> (di Napoli)	<i>Cushmarrella excenrica</i> di Napoli, 1952	<i>Alliatina excenrica</i> (di Napoli, 1952)	XLIII	10
2	<i>Allmorpha trigona</i> Reuss, 1850	<i>Allmorpha trigona</i> Reuss, 1850	<i>Allmorpha trigona</i> (Reuss, 1850)	XLIV	04
3	<i>Ammobaculites agglutinans</i> (d'Orbigny)	<i>Spirolina agglutinans</i> d'Orbigny, 1846	<i>Ammobaculites agglutinans</i> (d'Orbigny, 1846)	I	07
4	<i>Ammobaculites humboldti</i> (Reuss)	<i>Spirolina humboldti</i> Reuss, 1851	<i>Sabellovolva humboldti</i> (Reuss, 1851)	I	08
5	<i>Ammobaculites pyrenaicus</i> Colom & Ruiz De Gaona, 1950	<i>Ammobaculites pyrenaicus</i> Colom & Ruiz De Gaona, 1950	<i>Ammobaculites pyrenaicus</i> Colom & Ruiz De Gaona, 1950	I	09
6	<i>Ammodiscus cretaceus</i> (Reuss)	<i>Oberolina cretacea</i> Reuss, 1845	<i>Ammodiscus cretaceus</i> (Reuss, 1845)	I	02
7	<i>Ammonia beccari</i> (Linné)	<i>Nautilus beccari</i> Linné, 1758	<i>Ammonia beccari</i> (Linnæus, 1758)	XLI	03
8	<i>Ammonia inflata</i> (Sequenza)	<i>Rosalina inflata</i> Sequenza, 1862	<i>Ammonia inflata</i> (Sequenza, 1862)	XLI	04
9	<i>Ammonia capillosa</i> (d'Orbigny)	<i>Rotalia capillosa</i> d'Orbigny, 1850	<i>Rotalioides gammeri</i> (d'Orbigny in Formasini, 1906)	XLI	05
10	<i>Ammonia pericula</i> (Heron-Allen e Earland)	<i>Rotalia pericula</i> Heron-Allen e Earland, 1913	<i>Aubignya pericula</i> (Heron-Allen & Earland, 1913)	XLI	07
11	<i>Ammonia punctatograna</i> (Sequenza)	<i>Rotalia punctatograna</i> Sequenza, 1880	<i>Ammonia punctatograna</i> (Sequenza, 1880)	XLI	08
12	<i>Ammonia tepeida</i> (Cushman)	<i>Rotalia beccari</i> (Linné) var. <i>tepeida</i> Cushman, 1926	<i>Ammonia tepeida</i> (Cushman, 1926)	XLI	06-06bis
13	<i>Amphicorina proxima</i> (Silvestri)	<i>Nodosaria proxima</i> Silvestri, 1872	<i>Amphicorina proxima</i> (Silvestri, 1872)	XXV	02
14	<i>Amphicorina scalaris</i> (Bartsch)	<i>Nautilus scalaris</i> Bartsch, 1791	<i>Amphicorina scalaris</i> (Bartsch, 1791)	XIX	07
15	<i>Amphicorina semicostata</i> (Costa)	<i>Nodosaria semicostata</i> Costa, 1856	<i>Nodosaria semicostata</i> Costa, 1856	XIX	08-08bis
16	<i>Amphicorina sublineata</i> (Brady)	<i>Nodosaria hispida</i> d'Orbigny var. <i>sublineata</i> Brady, 1884	<i>Amphicorina hirsuta</i> f. <i>sublineata</i> (Brady, 1884)	XIX	09
17	<i>Amphistegina lessonii</i> d'Orbigny, 1852	<i>Amphistegina lessonii</i> d'Orbigny in Guérin-Méneville, 1832	<i>Amphistegina lessonii</i> d'Orbigny in Guérin-Méneville, 1832	XLII	10
18	<i>Anomalina complanoides</i> Galloway e Hemleyway, 1941	<i>Anomalina parvula</i> Grzybowski, 1896	<i>Anomalina parvula</i> Grzybowski, 1896	L	01
19	<i>Anomalinoidea alazanensis</i> (Nuttall)	<i>Anomalina alazanensis</i> Nuttall, 1932	<i>Anomalina alazanensis</i> Nuttall, 1932	XLIX	03
20	<i>Anomalinoidea alazanensis</i> (Nuttall) var. <i>spissiformis</i> (Cushman e Stainforth)	<i>Anomalina alazanensis</i> Nuttall var. <i>spissiformis</i> Cushman & Stainforth, 1945	<i>Anomalina alazanensis</i> Nuttall var. <i>spissiformis</i> Cushman & Stainforth, 1945	XLIX	04
21	<i>Anomalinoidea amphophila</i> (Günbel)	<i>Rotalia amphophila</i> Günbel, 1868	<i>Falsplanulina amphophila</i> (Günbel, 1868)	LI	01
22	<i>Anomalinoidea cicatricosus</i> (Schwager) var. <i>majoricensis</i> (Colom)	<i>Cibicides cicatricosus</i> (Schwager) var. <i>majoricensis</i> Colom, 1943	<i>Cibicides cicatricosus</i> subsp. <i>majoricensis</i> Colom, 1943	L	10-10bis
23	<i>Anomalinoidea domi</i> (Cole)	<i>Anomalina domi</i> Cole, 1928	<i>Anomalina domi</i> Cole, 1928	XLIX	06
24	<i>Anomalinoidea flinti</i> (Cushman)	<i>Anomalina flinti</i> Cushman, 1931	<i>Anomalina flinti</i> Cushman, 1931	XLIX	07
25	<i>Anomalinoidea granosus</i> (Hamilton)	<i>Truncatulina granosa</i> Hamilton, 1875	<i>Anomalinoidea granosus</i> (Hamilton, 1875)	XLIX	08
26	<i>Anomalinoidea helicina</i> (Costa)	<i>Nonionina helicina</i> Costa, 1857	<i>Hanzawaia helicina</i> (Costa, 1855)	XLIX	09
27	<i>Anomalinoidea ornata</i> (Costa)	<i>Nonionina ornata</i> Costa, 1856	<i>Hanzawaia ornata</i> (Costa, 1856)	XLIX	10
28	<i>Anomalinoidea pseudogrosserugosa</i> (Colom)	<i>Anomalina pseudogrosserugosa</i> Colom, 1945	<i>Anomalinoidea pseudogrosserugosa</i> (Colom, 1945)	L	02

The lines are arranged in the exact alphabetical order that they have in the book's index. The order is based on the name adopted by the authors of «Foraminiferi Padani».

One click on any cell of a given line opens in a new tab the page of the taxon specified in the line. The Original Description Name, when not available in the book, was assumed from WoRMS.

Most browsers allow text search by pressing Ctrl-F and typing some characters. This trick can allow a quick navigation of the list based on the original and on the current name, that may differ from the species name (1982) on which the alphabetical order is based.

The Navigation Panel at the top of the page includes one-click links to:

- The Home Page;
- The Thumbnails Page;
- The Introduction and Legend;
- The full book.

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thumbnails page

Foraminiferi Padani Online by Cesare Brizio THUMBNAILS

NAVIGATION					
Home Page «Foraminiferi Padani»	ALPHABETICAL INDEX	INTRODUCTION & LEGEND	BOOK (PDF, 71MB)		
 Table I, Figure 01 Reophax papillosum (Neugeboren)	 Table I, Figure 02 Ammodiscus cretaceus (Reuss)	 Table I, Figure 03 Glomospira charoides (Jones e Parker)	 Table I, Figure 04 Glomospira charoides (Jones e Parker) var. corona Cushman e Jarvis, 1928	 Table I, Figure 05-05bis Glomospira gordialis (Jones e Parker)	 Table I, Figure 06 Haplophragmoides obliquecarinatus Marks, 1951
 Table I, Figure 07 Ammobaculites agglutinans (d'Orbigny)	 Table I, Figure 08 Ammobaculites humboldti (Reuss)	 Table I, Figure 09 Ammobaculites pyrenaicus Colom e R. De Gaona, 1950	 Table I, Figure 10 Cyclammina placenta (Reuss)	 Table II, Figure 01 Cyclammina latidorsata (Bornemann)	 Table II, Figure 02 Spiroplectammina carinata (d'Orbigny)
 Table II, Figure 03 Spiroplectammina wrighti (Silvestri)	 Table II, Figure 04 Textularia abbreviata d'Orbigny, 1846	 Table II, Figure 05 Textularia sagittula Defrance, 1824	 Table II, Figure 06 Textularia concava (Karrer) var. jugosa Silvestri, 1920	 Table II, Figure 07 Textularia aff. Textularia mariensiensis Lalicker e Bermudez, 1938	 Table II, Figure 08 Textularia ponderosa Fornasini, 1887
 Table II, Figure 09 Textularia pseudorugosa Lacroix, 1932	 Table II, Figure 10 Textularia soldanii Fornasini	 Table III, Figure 01 Bigenerina nodosaria d'Orbigny, 1826	 Table III, Figure 02-02bis Vulvulina jarvisi Cushman, 1932	 Table III, Figure 03 Vulvulina pectinata Hantken var. mexicana Nuttall, 1930	 Table III, Figure 04 Vulvulina pennatula (Batsch)

The thumbnails are arranged in the exact order (by table number and figure number) that they have in the book.

One click on any preview thumbnail opens the page of the relevant taxon in a new tab.

Most browsers allow text search by pressing Ctrl-F and typing some characters.

The Navigation Panel at the top of the page is identical to the one appearing in the index page, with the only exception that one link points to the Alphabetical Index.

Taxon page

NAVIGATION
[Home Page «Foraminiferi Padani»](#)
[ALPHABETICAL INDEX](#) | [THUMBNAILS](#) | [INTRODUCTION & LEGEND](#) | [BOOK \(PDF, 71MB\)](#)
[PREVIOUS SPECIES \(Alphabetically\)](#) | [NEXT SPECIES \(Alphabetically\)](#)

Table XXIII, Figure 01 - *Operculinina complanata* (Defrance)

Linnean name as used in the book

Image from Foraminiferi Padani

←

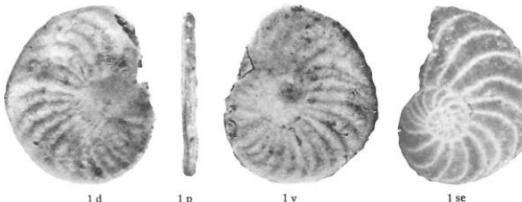


Table XXIII, Figure 01 - *Operculinina complanata* (Defrance)

Right click the pictures and "open image in a new tab" to access the full size images

←

Linnean name as used in the book



Distribuzione e frequenza

ELENCO SPECIE

1 *Operculinina complanata* (Defr.) x 10

←

Chronostratigraphical Distribution and Frequency of Occurrence

PIELOCENE

	PLIOCENE	MIOCENE		OLIGOCENE	EOCENE	PALEOCENE								
	Superiore	Medio	Inferiore	Messiniano	Tortoniano	Serravalliano	Langhiano	Aquitaniano	Superiore	Medio	Inferiore	Superiore	Medio	Inferiore

PROVENIENZA DEGLI ESEMPLARI FIGURATI

ORZIVECCHI I
cfr. nn 1707-1711 prep. n° 243
Oligocene inferiore

←

Table and Figure as used in the book

Identification on «Foraminiferi Padani» 2nd Edition

Table XXIII, Figure 01

***Operculinina complanata* (Defrance)**

Original description

Lenticulites complanata Defrance, 1822

WoRMS entry ([link](#))

←

Table and Figure as used in the book

***Operculinina complanata* (Defrance in Blainville, 1822)**

IMAGE QUERY ON FORAMINIFERA.EU



[Link to a reference picture on Foraminifera.eu](#)

←

Linnean name as used in the book

***Operculinina complanata* (Defrance in Blainville, 1822)**

IMAGE QUERY ON FORAMINIFERA.EU



[Link to a reference picture on Foraminifera.eu](#)

←

Current name as provided by WoRMS, with link to the WoRMS entry of the species

***Operculinina complanata* (Defrance in Blainville, 1822)**

IMAGE QUERY ON FORAMINIFERA.EU



[Link to a reference picture on Foraminifera.eu](#)

←

(if available) link to one sample picture from foraminifera.eu

The Navigation Panel at the top of the page includes one-click links to:

- The Home Page;
- The Alphabetical Index;
- The Thumbnails Page;
- The Introduction and Legend;
- The full book;
- The page of the previous taxon (in alphabetical order, according to the book index);
- The page of the next taxon (in alphabetical order, according to the book index).

One-click links to the WoRMS entry of the taxon and – when available – to a reference picture on the foraminifera.eu website are also provided.

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Other resources provided

The link to the «Foraminiferi Padani» Collection on foraminifera.eu

The image database by the foraminifera.eu website and community includes pictures of foraminiferans including species from the Italian Tertiary Era. Among those pictures, the most relevant, collected from Italian sites, have been flagged for inclusion in a collection that can be accessed by a link on the home page.

The PDF version of Foraminiferi Padani, Second Edition (1982)

A scanned copy of the original book in its 1982, 2nd Edition is provided for non-commercial use under the agreement signed with the Historical Office of ENI S.p.A.. The book is not formally released to the public domain, and without a specific authorization by the Historical Office of ENI S.p.A. it may only be consulted online.

The book is provided in its unaltered version, with Italian text only.

The introduction

The first pages of Foraminiferi Padani contain a Legend and some general information, and are provided separately under the same conditions as the whole book.

This manual

A PDF version of this manual is provided and can be freely downloaded and printed. This manual is released under the Copyright Commons Attribution-ShareAlike 2.0 Generic (CC BY-SA 2.0) License.

Planned evolution

New pictures

Periodically, the foraminifera.eu database will be checked and whenever practical the taxon pages lacking a recent picture will be implemented with a link to a foraminifera.eu entry.

Cesare Brizio reserves the right to insert new images of his own production in each Taxon page, whenever practical.

New links

The home page, currently released at the URL http://www.cesarebrizio.it/FFO/FP_Home.html, may be implemented with new relevant links at any time. This manual may, or may not, be consequently updated.

Cesare Brizio, December 2020