

Please to take the greatest
possible care of this M.S.

The M.S. is arranged in
following order

stubs for S. Josef
— P. Derive
— S. Julianus
— S. Cruz

— Chiloe
— Huafu
— Navidad
— Coquimbo

upper half of
201

Justly Shills Mr. Darwin

ZOOLOGICAL JOURNAL.

In order to render this Work as complete as possible, Mr. G. B. Sowerby has printed a Table of Contents for the First and Second Parts of the Supplementary Plates, which may be had gratis, by the Subscribers to the Work and possessors of the copies of the Supplementary plates, upon application at Mr. Sowerby's, 50, Great Russell Street, Bloomsbury:— at the same place may be had

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Voligny
Society
Index

Bravard

then with letters or shells
collected by CD

M. Aloïse D'Orbigny

Les lettres faites de l'Amérique
Monsieur Darwin

M Darwin

Spice Shell

85. 11/11/11 2nd class
86. 11/11/11 2nd class
87. 11/11/11 2nd class
88. 11/11/11 2nd class
89. 11/11/11 2nd class
90. 11/11/11 2nd class
91. 11/11/11 2nd class
92. 11/11/11 2nd class
93. 11/11/11 2nd class
94. 11/11/11 2nd class
95. 11/11/11 2nd class
96. 11/11/11 2nd class
97. 11/11/11 2nd class
98. 11/11/11 2nd class
99. 11/11/11 2nd class
100. 11/11/11 2nd class

My Dear Sir

You will probably have

expected this sooner, the points to be settled seem however difficult - After the most careful examination of all the specimens the result will appear in the separation of two sorts from *T. Cambalana*, this I have done, not because I am myself fully satisfied of its propriety, but because I found characters which would be considered satisfactory (as distinguishing characters by some (*D'Orbigny inter alia*) characters which some would regard as specific, others as only variations - however my opinion is that wherever a combination of characters distinguishing one subject from another exist, they should always be noticed, whether they be considered as the characters of a species or only of a

variety.

Will now explain my operations

- 1st those of Huafu & Mocha I have described as *T. Chilonensis*
- 2^d that of Port Desire, together with the Nevada (*T. carinifera*) and several specimens without locality, but number 632 I have described as *T. Patagonica*.
- 3^d the St. Julian must be regarded as neither more nor less than *T. ambulacrum*.
- 4th but strike out from the Nevada series the one resembling *T. carinifera*.
- 5th also the *T. ambulacrum* with somewhat slightly external characters from the Port Desire list.
- 6th of the additional specimens one (numbered 632) is already disposed of; the two others are such mere casts or fragments that they cannot be brought into the account.

7th I must now add with respect to the fragments from Nevada formerly said to resemble *carinifera*, but which I now recommend you to strike out, that, one fragment also belongs to *T. Patagonica*, the rest are probably *ambulacrum*, but are very indistinct.

The specimens shall be packed up on Monday or Tuesday and sent to the Geol. Society for you.

I am My Dear Sir

Yours very obliged,

J. B. Sowerby

17th Jan 1861

N.B. To late for post.

My Dear Sir

On the other leaf I have copied your list and stated what I believe will be found correct relative to each genus.

My conclusion would be that the fossil shells of *Navicula* have not a particularly tropical character. The *Conus* is small - a larger species is found in the Med.[™] though the large sorts are tropical. It may be doubted if *Sigaretus* is really found in the Med.[™] it is probable that it may belong to *S. Australia*.

Perna abounds in tropical latitudes - and if any are found on the *S. Australia* coast - they are scarcely known - fossil species are found in Piedmont & Normandy &c. *Harpa* is one of the most decidedly tropical genera. *Conus*, *Cypraea*, *Orbulina*, *Mitra*, *Terebra* - *Melagrina*, *Perna*, *Voluta* - *Fusus*, *Triton* &c. may be regarded for the most part as tropical - though there are perhaps some exceptions in each genus. There is scarcely a genus of any extent that has not some species in temperate and extra-tropical zones. Thus there are *Conus*, *Conus*, *Mitra*, *Fusi*, *Tritons* &c. in the Med.[™]

Concerning *Trigonocelia* I believe there is not known any recent species: fossil species exist in our European tertiary beds. How can D'Orbigny admit *Trigonocelia* if he turn out *Cucullus*? *Crassatella* is not peculiarly characteristic of the Australian seas,

some species are found in the Atlantic and Indian seas.
You know the recent *Strophilaria* belong to N. Zealand,
and the *Trogonia* abounds at, ^{or near} Sydney, N. S. Wales:
the genus is found fossil almost everywhere.

Thus have I, to the best of my abilities answered
your queries - I hope satisfactorily and remain

My Dear Sir Your very obliged
J. W. Sowerby

7th Feb. 1846 -

Charles Darwin Esq.

Gastrodium - I know no recent species; other fossil species are found aux environs de Paris.

Monoceros, the greater number belong to the southern parts of S. America.

Voluta, ranges as you say to "Str. of Magellan" there are also some fine ^{South} Australian species (*magnifica*, *fluctuata*, *Turneri*, *Labra*, *pulchra* &c) though I believe the greater number and those with most brilliant colours are tropical.

Oliva - abounds in tropical latitudes; though some fine species are found to the northward; it can scarcely be regarded, in any degree characteristic of other than the tropics.

Pleuratoma - few species belong to temperate or mediterr. zones.

Fusus - ranges to high northern latitudes, though I believe the finer species are intertropical.

Turritella
Trochus } your Navidad species might belong to temperate latitudes as far as they are concerned.

Cassus - in general tropical, some few small species are found north of the tropics - there are also some S. Australian species.

Pyruis — tropical

Toston — some large species are found in Am. Ind. &
S. Australia.

Sigaretus — not entirely confined to tropical climates

Natica — has a most extensive range.

Bulla — also

Terebra — though not entirely confined to tropical latitudes
is nevertheless very characteristic of them.

Pantabium — very nearly as *Natica*, though the large &
fine species belong to the tropics.

Corbis — I believe tropical — as there is some uncertainty
about your *Navalis* species, it would not be right
to draw any conclusion from it.

Cardium — has a very extensive range.

Nemus — do.

Pectenuculus — do: its greatest development in the Ind.

Cytherea — ~~do~~ has a very extensive range.

Mastrea — do:

Actin — do.

Note for Mr Darwin relative to his addition
to *Strophia ovata*. App. p 12.

I see no objection to this addition being
inserted, provided that the fact of Mr. Cuming
having found a living species of *Strophia*
at Africa be given on the authority of
Mr. Cuming himself and not on mine.

Mem: In my opinion the Latin of
Darwin is Darwinius - that of
Sowerby - Sowerbicus - as w is not
a Latin letter - Mr Darwin must
use his own discretion.

Specimens Mr Darwin has altered
the spelling of Navada to Navidad.
it is a subject with which I am
entirely unacquainted & only mention
it for Mr Darwin's consideration.

Trigonocelis p. 4. The observation
may properly stand as it is.

Buenos Ayres

6 (1)

The Fossil Shells from this locality are either well known among recent species from the same locality, or in so incomplete a condition that they cannot be identified. They are

- 1 *Maclra*, numerous specimens, but in bad condition.
- 2 *Venus flexuosa*
- 3 *Cytherea*, several specimens, too imperfect.
- 4 *Potamomya labiata*.
- 5 *Ostrea*, - generic character alone distinguishable.
- 6 *Buccinum globulosum*
- 7 *Oliva patula*: the difference between these and the living shells is so slight, that it cannot be regarded as specific.

Upraised Shells, Copiapó, ⁷
Chile

- 1 *Mulinia Byronensis* Gray. (n.º 846.)

Upraised Shells, Chiloe.

- 1 *Venus costellata* Sowb. Zool. Proc.
- 2 Odd valves of an *Ostrea*, quite destitute of distinguishing mark; they may be young shells of *O. latipina* Desh. or only *O. Edulis* Linn. (n.º 535.)

Upraised Shells near
Valparaiso.

- 1 *Concholepas peruviana* (n.º 145. 146.)
- 2 *Pipurella biradiata*
- 3 *Trochus*, not yet named but well known & very common. (n.º 150.)
- 4 *Mesodesma donaciforme* Desh. (n.º 242.)
- 5 *Balanus* not yet named, but very common on all the coasts of Peru.
- 6 Fragments of *Mytilus Chilensis*

Patagonia

8

Costrea Tatissima Deshayes Coquilles Pop. des Env.
de Paris t. I. pl. 52. 53.

Unpraised Shells. Patagonia

* The Fossils of this Locality are composed of three separate parcels, probably different epochs, viz.

- 1 A granular Limestone (n. 381.) containing two fossil species; one, by far the most abundant, probably a Melania, the other probably a Paludina.
- 2 Coarse Siliceous Sand (n. 342 & 378) with fragments of a Cytherea, a Pectunculus, an Olivia, a Margarita, a Cypraea, a Terebra and a Macropora, all probably the same as recent species. I think two specimens of a Vermetes that are associated with these are really only living shells of the present time.
- 3 Shells of recent species living at the present time in the neighbouring Seas: viz. Mytilus Magellanicus Lam.; a Mytilus not described; Patella deaurata Lam. Volva Ancilla Lam.; Fusus Magellanicus, (Murex Lam.) ~~was~~ a variety of the same; and a Balanus, probably B. Tulipa.

- 3 Cast of the inside of a Cytherea
4 Fragments of a Pecten. P. variis (now described)

Turritella ambulacrum.

Many specimens, some of which are rather variable in external characters, and all imbedded in a light grey friable sand; number under N. Cruz hills.

Lewis & Clarke's Travels

Page 139. between Latitude 47° & 48° & about 102 West of
Saw quantities of Lava & pumice Stone. is not
a Geologist.

See Santa Cruz p. 9.

This may possibly be distinct from the
Natica solida of Navarros, Chile; it is
however obviously impossible to
be certain, seeing that no part of
the outside of the shell remains.

Venus meringii D'Or.
~~nearby added to the list of~~
 described in his work?
~~St. Cruz~~

Suppose this to be *Natica Cruziana* ¹⁴
 D'Or.
 no part of the outer surface remains
 & therefore it cannot be described.
 St. Cruz

~~St. Cruz~~

Serritella carinifera Desh.

A fragment of a shell which I believe to be of this species.

Found at the Cape Horn station in Chile.
 I believe it is the same as the one found at the Cape Horn station in Chile.
 St. Cruz

Venus suboccurans. (Lorenz. 3. 1843. p. 16)

Venus, testa oblonga, anfractibus sex, spiraliter striatis,
 et longitudinaliter costatis, striis confertis, costis
 obtusis, postice interruptis; sutura distincta; canali
 mediocri ^{suboccurans} long. 0.65 lat. 0.3 poll.

A single specimen. I do not know any recent species
 that nearly resembles it.

New Bay 17
northern coast of
Patagonia

- 1 Cast of a *Lucina* (n^o: 370)
- 2 *Pecten asper*
- 3 Coralline coating *Turritella*
- 4 *Musculella Marroponi*
- 5 *Scutella*, probably new species

^{from an}
Unraised, inland Bed; Malconado

18

(1/2)

From this locality there are only four species, viz

1. *Potamomya labiata*
2. *Solen caribaeus* ^{family} (*Solen ~~caribaeus~~ caribaeus* Be. M.)
3. *Mytilus*, fragments
4. *Assiminea* or *Paludina*

1312

- 1 Pectea Bellovacina Dosh. t. 50. p. 6. (n. 580)
- 2 Pectea Virginica Lam. (n. 568. 569)
- 3 A Pecten resembling aserrimus, but as the internal surface alone can be seen, it cannot be positively identified. (n. 571. 570)
- 4 Cast of a Tellina
- 5 Casts of a Venus? (n. 584)
- 6 Two odd valves of an Area, (both imperfect) which cannot be distinguished from A. inaequalis Lam. (n. 579)

7 Venus lamellifera, testâ subovatâ, gibbâ, lateri ^{postico} ~~postico~~ longiore, antice brevi, sub umbonem sinuatâ; superficie striis radiatilibus (nunquam duplicatis), lamellis concentricis elevatis ornata; margine dorsali planulatâ, striatâ, impressione anticâ cordiformi, lata: long. 1.7, lat. 1.1, alt. 1/4 poll.

This beautiful species resembles Venus cancellata Sin. most nearly; it differs from that species in being much more ventricose, in having the anterior impression deeper and in the greater development of the concentric lamella, which are deeply striated from the base to the outer edge on both sides. Found in a loose sandy bed. It is possible that the casts mentioned above may belong to this species. (n. 578.)

- 8 Map containing a cast of an Area or Cucullia (n. 567)

² copies
of the book means to be
recovered

St. Joseph's Bay
North Patagonia

20 (3)

Paraná's D. Oct. 1849 Vol. 10 Pl. 11 p. 50 of the work
18 Oct. after, Min. Com. 370 f. t. more abundant

21
Port Desire, Patagonia

A fragment of the hinge of a Bivalve, probably a *Cyprina*; the specimen shows the beak, the fulcrum for the ligament and one large tooth, but is otherwise so incomplete that we cannot be certain to what genus it belongs.

21④ 4
Port Desire, Patagonia

Cucullaea alta. N. 20 f. 22, 23

The specimens from this locality are larger than those from Santa Cruz.

Strobilium, comata

Besides the species described there are the following from this locality.

Pecten asper Sowerby Min: Conch: t. 370 f. 1.

Cast of a *Cardium*, very indistinct.

Cast of a Bivalve, supposed a *Cyprina*, from its not having any siphonal scar in the palled impression.

Another cast of a Bivalve, supposed to be a *Corbis* from the umbones being nearly central.

~~*Terebratula*~~ ^{Patagonica, J. orthig.} Min: Conch: 576 f. 2 to 5.

Casts and fragments of *Turritella ambulacrum* _{not}

~~*Fusus lamellosus* (*Murch lamellosus* Lam.) The specimens of this shell are unusually large they appear to connect *Fusus magellanicus* with *F. lamellosus*, being of a more elongated form than the ordinary variety of *F. magellanicus*, but still having the varices acuminate posteriorly.~~

Cast of a *Cyprina* resembling *Pecten* ^{separating} ~~*pectinis*~~ also similar to *P. ventricosa* Sowerby Transk. Cat.

Turritella

N. P. 1. Conch. at St. Julian

See new species
L. 20. before

Cerithiopsis verrucosa? Goldf. t. X. f. 6. formed upon a spiral shell.

Turritella ambulacrum

23 9
St Cruz, Patagonia.

Not only does the Mineralogical Character of this bed, ~~but~~
~~also~~, ~~resemble~~ the ~~Popit~~ ~~shells~~ ~~contained~~ ~~in~~ it, resemble
that of Mavedad, Chili, but several also of the Popit shells
contained ~~in~~ it, are identical with those of that bed.
The shells of this bed are in a very imperfect state of
preservation, so that it is difficult to characterize or identify
them; two or three are however remarkable & distinct
enough to be described.

Those resembling the Mavedad species are

- 1 *Voluta alta*, ^{Pl. IV. f. 75} of which there are two casts with scarcely
any remains of the shell; these casts are however
interesting because they show ^{the form} ~~the form~~ of the anterior
part of the shell.
- 2 *Prochus collaris*, ^{Pl. IV. f. 66, 67} of which there is a single specimen
the which has lost all its pearly lustre.
- 3 *Natica solida*, ^{Pl. III. f. 40, 41} several specimens very much discoloured, because

J. Cruz Patagonica

The following are too imperfect to be described.

A *Byzsoarca*, somewhat similar to *B. Noa*, two fragments.

An *Artemis*

A *Cardita* now described as *Cardita patagonica* D'Orb.

~~A *Neris* nearly like the recent *N. plicata* Lam. which is found on the West coasts of Africa.~~

A *Neris* slightly resembling *N. fasciata* Montagu, which is common on the British shores.

A *Cardium* with very delicate close set radiating lines. (Card. *faulebum* Hoff. *faulebum* D'Orb.)

A Bivalve, probably a *Macla*, its genus however cannot be decided, because its hinge cannot be displayed. Known called *Macla Donovini* D'Orb.

A fragment of a *Crassatella*. now described as *Cr. Lyellii* D'Orb.

A Bivalve, probably a *Tellina*.

A *Serpula*.

A *Fusus* nearly like *despectus* in its proportions and general form, but which has had obtuse longitudinal ridges somewhat similar to those of *Puccinnum undatum*.

~~Swift thinks them are two species
differ in the shape of the
sculpture which are the 2. side of the shell~~

All that can be distinguished in this bed is a fragment of a *Volute*, too incomplete to be identified; two fragments of *Luridella saturalis* (vide Navidad, Chili); and an imperfect specimen of *Sigaretus subglobosus* (vide Navidad, Chili).

The fossils of this bed are in such a completely decomposed state, that it is only possible to enumerate the generic names: they are

- a *Solen*.
- a *Novaculina*
- a *Cytherea*
- a *Crepidula*
- a *Mytilus*.

Besides the four species described, all that can be in any manner identified from this locality are,

- a fragment of a Solen and
- a fragment of a Bivalve, probably a Cytherea

~~XXX~~

The Shell which appears to abound most in this bed is identical with the recent *Turritella cingulata* (Sowerby Tank. Cat.) which is found in great profusion at Valparaiso and at Coquimbo. All the Shells of this bed are tender & fragile and they are imbedded in a soft friable sandstone. Besides this there is a small & very imperfect specimen of what I suppose to be *Venus* ^{think was} *caalbida* Lam. and a ~~rather~~ single valve of one of the acéphalous Mollusca, which is too imperfect to allow of its genus being determined.

(a slip made to please about the same time)

Chiloe, ~~Exp. no.~~ ³⁷ 20

Besides the four species described, all that
can be in any manner identified from this locality
are,

a Fragment of a Solen and
a fragment of a Bivalve, probably a Cytherea

XXX.

The Shell which appears to abound most in this bed is identical with the recent *Turritella unguolata* (Sowerby Tank. Cat.) which is found in great profusion at Valparaiso and at Coquimbo. All the shells of this bed are tender & fragile and they are imbedded in a soft friable sandstone. Besides this there is a small & very imperfect specimen of what I suppose to be *Venus* ^{that was from} *coarctata* Sam. and a ~~rather~~ single valve of one of the acéphalous molluscs, which is too imperfect to allow of its genus being determined.

(A slip under to please about the Turritella)

(Nos 161. 165. 169. 168)

Trigonis imitosa, testâ ovato-subcuneiformi, crassâ, latere antico brevi, rotundato, postico producto, sub-acuminato; ~~et~~ antica parte rugis elevatiusculis, irregularibus, obliquis, varicosis ~~irregularibus~~, pone medianam obliquè terminantibus, instructâ; posticâ parte lavi, lineis incrementi solum habentibus, carinâ obtusâ ab umbonem usque ad marginem inferiorem posticam decurrente; long. $\frac{1}{2}$ lat. 1.5, alt. 2.7 poll.

This species, which we do not find represented either by DeBuchs or Lea, resembles var. β of *Trigonis gibbosa* Allen, Con. t. 236 most nearly, which belongs to the Portland Oolitic Beds of Tisbury. It may however be readily distinguished from that species, by its less gibbous form as well as by the different form & structure of the rugosities on the two thirds of the anterior surface. There are several casts of the same, (numbered 163. 164. 171.)

Conception

Baculites vertebralis (N^o 172. 166. 174.)

May not the occurrence of this genus be regarded as confirmatory of DeBuchs's opinion, that these beds belong to the Cretaceous group?

not / Will refer to the two casts of the Pecten
45 / & Savoy can say no more than that
Nautilus (n° 170) is in Pecten

Diaplecton ³⁰ (26)

This cannot be regarded as *Nautilus simplex* of
Min. Con. t. 122, because there is in this a small lobe
near the commencement of the chambers, in which
respect it slightly resembles *N. sinuatus* Min. Con. t. 146.
It is apparently an intermediate form, but the specimen
is too imperfect for description.

Cast of a *Maestra*? (n° 167)

Imperfect valves of a *Pecten*? (n° 172)

Natica Gibboniana? See Amer. Phil. Trans. new series
vol. vii, p. 256 t. 9. f. 10. a very incomplete
specimen: (n° 173)

Besides the above there is a cast of a large Bivalve,
in so indistinct a condition that it is not possible to
ascertain its genus (n° 160)

Will suspect that the two casts of the Pecten
to Sowey can say be more than the
Nautilus (n: 170) in Pecten

30
Pecten (26)

This cannot be regarded as Nautilus simplex of
Min's Con: t. 122, because there is in this a small lobe
near the commencement of the chambers, in which
respect it slightly resembles N. sinuatus Min's Con: t. 144.
It is apparently an intermediate form, but the specimen
is too imperfect for description. - seq. Galloway's

Cast of a Mactra? (n: 167) Atlantic? Paleozoic

Imperfect valves of a Pecten? (n: 172) thin shell

Nautilus gibbosa? ^{Austrian? n: 173} ^{Paleozoic} Amer. Phil. Trans. new series
vol. vii, p. 258 t. 9. f. 10. a very incomplete
specimen. (n: 173)

Besides the above there is a cast of a large Bivalve,
in so indistinct a condition that it is not possible to
ascertain its genus (n: 160)

Nauvedad, Chili.

31

27

The Fossil Shells of this locality present a general resemblance in external appearance to recent species of tropical & infrotropical forms, but a particular examination of them proves nearly all of them to be specifically distinct from any recent species with which we are acquainted up to the present time. ~~It is apparent, however, that our which~~
~~might be placed at the present, ^{the} appearance~~
~~of~~. The imperfection of the specimens will in some instances render it impossible to detail the whole of their characters.

Besides those which I have been able to describe there are some few in so incomplete a condition that I can only conjecture the genus to which they may belong. I

over

add a list of these, and of one or two others, which must be regarded as doubtful species.

Cytherea, somewhat resembling *C. Erycina*; but no part of the external surface remains.

Venus, ^{meridionalis D. Or.} ~~nearly allied to scabrida Lam.~~

Artemis Gray, a single valve probably belonging to this gen.

Maetra, a few small single valves.

Pecten, a small single valve.

Teredo, small fragment of a tube.

x Balanus, a fragment.

x Monoceros or Purpura, a fragment of the posterior part.

~~Pecten granulatus~~

x Pedunculatus dispar? D. Or. abundant.

Pectunculus, Navada, Chili
may possibly be distinct from Pectipar
of Vofs. it agrees however so well
with the description that it would not
be prudent to describe it as distinct.

- 1 *Venus opaca* Brod. & Sov. (young shells)
 + 2 *Artemis ponderosa* - commonly called
Venus concentrica, though sufficiently distinct
 from the ~~same~~ *Artemis* ~~and~~ *Venus concentrica*;
 but also well known as a recent S. American
 species: it is proved to be a true *Artemis* by the pattern
 of the shell. ~~It is a true Venus concentrica in proper~~
 3 *Natica duplicata* ~~Wood~~ ~~supposed~~ ~~to be~~ ~~an~~ ~~Atlantic~~ ~~species~~

Besides the above, which cannot be distinguished from recent individuals, there is a bivalve in such imperfect condition that it is not possible to ascertain whether it be a *Mya* or *Sulvaria*; and also a univalve, resembling a *Buccinum*. Also a *Sigambra* ~~of the~~ ~~type~~ ~~then~~ ~~from~~ ~~Patagonia~~.

Coquimbos (older series)

Perna macillata Lam. ~~found in the~~ ~~of~~ ~~the~~ ~~of~~

There are several large specimens of this species which has only been known ^{hitherto} on a fossil state; and which is said to have been brought from America by Lamarck, though he gives no precise locality. I have it from the vicinity of Turin in Piedmont.

Coquimbos (older series)

Bulla Hydatis ~~Antiqui~~ ~~7~~ ~~Ob.~~ ~~Pl.~~ ~~12.~~

There is a cast of a *Bulla*, which agrees in shape & thickness with our common European *Bulla Hydatis*, being however only a cast it is impossible to ascertain with certainty whether it be the same or to describe it if different.

Perhaps not *Venus opagna* 324

it is however impossible to tell
what genus it belongs to - attempts
having been newly made to get at its
king, without success. G.H.S.

~~Cardium~~Cognate to *Platea**Cardium vada.* Anca 7. May. Pl. 18.

Cardium, testa suborbiculari; crassa, radius 40, rotundatis
 rugosis, interstitiis radiatibus posterioribus angustis, con-
 fertis, ceteris subequalibus; interstitiis angustis; long.
 2.25, ^{alt.} 2.25; lat. 1.8, pell.

The general appearance of this species resembles that
 of our common European *Cardium tuberculare*; the
 number of radiating ribs is however nearly double
 and the interstices are much narrower & not regular.
 Several specimens embedded in green blocks of onyx

and there

9. 2. 1855

Sept

1. September 1855

1855

Main land in 1855

Coguimbo (older series)
collected by CovingtonThe fossil shells thus designated are ^{in two part of the} _{intermediate Bed.}

- 1 in *Sulvaria*?
- 2 *Mytilus*, identical with *Mytilus Chilensis*
- 3 Casts of a *Tridacna*
- 4 Casts of a *Turritella*
- 5 Casts of an *Olivia*?
- 6 Cast of a *Cassia*?
- 7 Cast of a *Cytherea*
- 8 Two specimens of *Monoceros* ^{Covington} ~~anguliferum~~.

~~These shells were first collected by myself, that were
in the same position of the above~~

They are embedded in sandstone & do not describe
in strata than from the upper series.

... (see vol. II) ... Coquimbo 2844.

The few fossil shells which bear this number are

- 1 A species of Ostrea, very imperfect & much worn, so that it is quite impossible to specify it.
- 2 Fragments of a ~~Patella~~ Pecten, ~~probably an undescribed species~~ but the fragments are quite insufficient.
- 3 A cast of the inside of a Natica.
- 4 A Balanus, much worn and adhering to a worn specimen of a Monoceros; it appears, as far as I am able to judge from such worn specimens to be identical with a species which now lives in great abundance on the neighbouring coast.
- 5 A group of fragments of Balani, similar to one belonging to the "Coquimbo, intermediate bed" which see.
- 6 Several specimens of Monoceros ^{cariniferum} ~~intermediate~~ described among the fossils of "Coquimbo, ~~intermediate~~ intermediate bed."

The shells of the list, ~~some~~ ^{may} belong to the "intermediate bed" but were specified with the great Pecten.

... (see vol. II) ...

Coquimbos
intermediale Bed.

Coquimbos

36 (44)

The fossil shells from the bed thus designated are
1 A species of *Coluca* in very imperfect state

Coquimbos

37 (45)

Monoceros cariniferum Blainv. Tab. 91
intermediale bed.

Monoceros cariniferum. Testa ovata, subglobosa, crassiuscula,
lavi, spiræ plerumque brevi, nunquam levatiuscula; an-
fractibus quinque, carinatis ultimo maximo, 1-2-vel 3-
carinato, carinâ posticâ validiori, constante; aperturâ
ovata, posticâ calis anguliferâ, dente antico breviuscula.

This species, which varies greatly in its form, as well
as in the number and distinctness of its carinations, is
decidedly identical with that in bed marked "Coquimbos
2844". One young specimen has scarcely a trace of a keel,
this individual is moreover very thin.

Upper Strait + lower plain
 Coquimbo (same plain)

Pecten purpuratus Lam.

The fossil *Pecten* which occurs in this locality, resembles very closely a recent species, which is common at Coquimbo and to which we find the name *Pecten purpuratus* Lam. attached in the British Museum. I cannot however regard this as decidedly the *P. purpuratus* of Lamarck, ^{and} as I have never had an opportunity of comparing it with the specimen in Lamarck's collection, I am unable to decide: in the short character which Lamarck gives of his species there are two circumstances in which it differs from our recent species from Coquimbo, which are, the number & convexity of the rays. Lamarck in his character of *P. purpuratus* says that it has 26 convex rays, whereas in our shell the rays are 22, and all very ^{markedly} flat. With regard to the locality, ~~it is~~ ^{we} observe that Lamarck, speaking of his *P. purpuratus*, says "Habite les mers orientales et australes"; and afterwards "On le dit du Japon": neither of which localities accords with that of our shell. One other circumstance contributes, with those already mentioned, to render it doubtful in my opinion whether our shell be the *P. purpuratus* of Lam. for our shell has a remarkable character which is not noticed by Lamarck; it is this,

over

34
when the Shell has reached a diameter of about two inches, ~~the~~ small interstitial ribs make their appearance between ~~some~~ of the principal ribs, which interstitial ribs become quite distinct when the Shell has arrived at a diameter of 3 1/2 inches. Supposing however that the recent species in question is the *P. purpuratus* of Lamarck I have now to state that the fossil resembles it very nearly in every character, differing only in having the principal ribs more convex, the interstices narrower and ~~the~~ ventral points of the interstices obtusely bidentate instead of being only obtusely quadrate.

~~Agassiz~~

No. 2789

~~Agassiz~~ (49)
38v

- 1 Venus opaca Brod. & Sow. Lach. Bor.
- 2 ^{in the collection of Agassiz} ~~Mulinia~~ ^{Gray} ~~Byronensis~~ ^{Nat. Hist. Mag.}
- 3 Turritella cingulata Sow. Tank. Cat.
- 4 ^{in the collection of Agassiz} ~~Cyrena~~ ^{Gray} ~~donaciformis~~ ^{donaciformis?}
- 5 Calyptraea ^{in the collection of Agassiz} ~~Byronensis~~ ^{Gray} ~~donaciformis~~
- 6 Monoceros costatum Sow.

These are all the species I find under this allocation; some of them are in very good condition; I find nothing to distinguish them from recent species; they come from the same upper series. —

38a and various recent with tent of edam (pl.)

~~Venus Chilensis~~

Slight differences are observable between the fossil & recent specimens of this species, they are not however greater than may be observed in different ^{recent} individuals ~~of the same~~ from the same locality.

Payta, Peru 39 (50)

Only two fossils are from this locality, namely

- Pectunculus transversus Lam.
- x
- Ostrea Virginica Lam.

(If you have not this Pectunculus, pray keep it.)

Cordillera of Copiapo ⁴⁰ (31)
Northern Chile

In this locality are the following

- 1 *Pachyodon*, very closely resembling *Uria Listeri* of Min. Con: t. 154 f. 1.3.4. which belongs to Mitchellburg's genus *Pachyodon*. The specimen appears to have lost its external surface, so that if really distinct no character remains to distinguish it by.
- 2 *Lima* very nearly resembling the shell called *Plagiostoma rusticum* Min. Con: 381. but probably distinct; the fragments however are not sufficient. (65)
- 3 *Pecten alatus* DeBueh loc. cit. (59)
- 4 *Perna quadrata* var. Phillips Yorkshire Part 1. t. X. f. 21.22 (66)
- 5 *Gryphaea incurva* Min. Con: t. 112 f. 1.2. (64, 58.)
- 6 *Spirifer linguifera* ^{his class Chile} Phill. Yorkshs Part 2 t. X. f. 4 (997)
- 7 *Terebratula tetrastria* Min. Con: t. 83. f. 4 (n. 133) ^{his Chamorro & Chile}
- 8 *Terebratula obsolata* ^{sally of Darwin & his class} Min. Con: t. 83. f. 7 (n. 132) ⁷³ (127)
- 9 *Trochus Humboldtii* (*Pleurotomaria Humboldtii* DeBueh Petrif. Occisill. ex Amargue par Humboldt p. 9 f. 26. This is not a *Pleurotomaria*. (n. 60. 61. 110)
- 10 *Avicula echinata* Min. Con: t. 293. f. 1.

Guasco Alto;
Cordillera of Northern Chile

From this locality there are several species of *Terebratula*. It is well known that many species of this genus are very variable in the forms they assume, which renders the determination of them exceedingly difficult. Thus among 24 specimens which I believe to be merely varieties of the same species, there are some agreeing very nearly with *T. hastata* Min. Con. t. 446 f. 2, 3, others like *T. trigonata* Min. Con. t. 446 f. 1, others like *T. biflicata* Min. Con. t. 446 f. 1, 2, 4 while some bear a not very distant resemblance to *T. emarginata* Min. Con. t. 435 f. 5. It is more than probable that several of the above named are merely varieties of growth or age of the same species: perhaps all except *hastata* might ~~be~~ properly be regarded as varieties of *T. ornithocephala*.

Next to this come numerous varieties and various stages of growth of *Terebratula obsoleta* Min. Con. t. 83 f. 7.

Besides these there is one resembling *T. ~~obsoleta~~ ^{long} ~~obsoleta~~ ^{Wiesinger}* ~~obsoleta~~ ^{Wiesinger} which also closely resembles a recent species from the Coast of Peru. Phillips t. 12 f. 26. (no. 39).

One specimen of *Terebratula Pleurodon* Phillips t. 12 f. 26. (no. 39).
A *Spirifer* resembling *spirifer pinguis* Allen. Con. t. 271. Phillips Geol. of Yorksh. t. 9 f. 18, 19 and only differing from it in having two or three small ridges along the elevated central radiating ridge of one valve & corresponding depression of the other valve.

A *Succinea* resembling *S. concentrica* and
One specimen of *Trochus Humboldtii* (*Neurotomaria* Dohrn)

Cordillera of Coquimbo

N: 781. 782. 783. 784. 785. 787. 7978.

Pecten alatus DeBuchs' Petrifications recueillies en Amer.
= signe par Humboldt in p. 3. f. 1. 2. 3. 4.

There is no doubt that several specimens in this collection belong to this species, although the stria mentioned by DeBuchs as rising into little scales on the ridges are not evident in these specimens which are entirely deprived of the outer surface of the shell. The general form of the shell, however, as well as the number & form of the ridges and interstices agree with DeBuchs' species. One specimen is remarkable for having the shell in a great measure replaced by Calcimony in irregular concentric globules similar to those which compose the Beckite found in the Limestone of Torquay.

Cordillera of Coquimbo

N: 777. 778. 779. 780.

Progyra sinuata? Min. Con. 1. 336 where it is called
Gryphaea sinuata. The specimens are very incomplete,
it is however probable that they belong to this species.

Fistula longispina

43 (59)
~~Consistencies of Coquimbos~~

Besides the above I find the following from this locality
Gryphaea dilatata (786-788.)

A species of *Orthoceratites*, very incomplete (945)

A Madrepora probably of the genus *Astraa*. (977)

2780

Large Gryphaea - very like & probably identical with *Gryphaea orientalis* (Purbeckian), in the Geological Survey's collection from the south of India.

82

The few fossils belonging to this locality are all very indistinct, the following indications are therefore all that can be given

- | | | |
|--|----------------|----------|
| <i>Lucina</i> ? | (no. 618) | Lucina |
| <i>Caogya</i> | (no. 615) | Lucina |
| <i>Pinctada</i> ? | (no. 750) |) Lucina |
| <i>Ostrea</i> | (no. 752) | |
| <i>Crassatella</i> ? | (no. 614) | Lucina |
| <i>Glyphaa dilatata</i> ? | (no. 617) | Lucina |
| Ammonites ? something like <i>A. Vanuxemensis</i> Lea, but too indistinct and only a small fragment. | | |
| <i>Natica gibboriana</i> ? | Lea. (no. 613) | Lucina |
| <i>Terebratula</i> ? | (no. 611) | |
| <i>Cerithium</i> ? | (| |

~~Upper Chalk of Sicily Det. Burgo.~~ 45 (57)

1. *Ammonites*? *irregularis*, testa costellis radiantibus, numerosis, ^{irregularibus} ~~confertis~~, in tergo dichotomis ornata.

This appears to be very distinct from any described or figured by DeBuchs & Lea. It is however only a fragment, so that its general shape cannot be ascertained, nor can we be certain that it is an Ammonite. It is very much compressed.

N. 803. 804. 801. 802

Dear Darwin

I return you a
proof of the Form-Descriptions
corrected. As I originally
gave the names, had
not "E. Forbes" better be
left out ~~after~~ each
species — the general
leading sufficing — ^{W. Smith}
Dowley's name would
remain attached to his
Descriptions. — they to
be placed within inverted
commas.

As I have been absent
from town for the last
4 days, working my

Thursday

Dear Darwin.

~~My letter directed
to the Survey - at 6 days
cannot chasing X with always
found in -~~

~~Glyphaea orientalis
is from the Southern India*
beds & is corallaceous. ^{Probably of} ~~Greenland~~
& Verbeek's thin - not particularly
in this case.~~

~~I shall look out for the
Coprinus obovatus which
had escaped me.~~

~~I obeying & am
Kuch no doubt mean to~~

same thing. *Exogyra* or
Gryphaea Coulteri is a
characteristic Neocomian
fossil. Von Buch's conclusion
of the beds forming a passage
from the white to the
Chalk is exactly what
I believe to be true. Von
Buch wrote before the
"Neocomian" was identified.

The relative positions would
be as follows:

| | | |
|-----------|-----------|------------|
| England | (England) | America. |
| Louisiana | Neocomian | Your beds. |
| Woolden | white | |
| Old beds | | |

Probably looks on the
American beds to be purely "Neocomian"

since he holds the doctrine
of definite divisions or
formation everywhere.

Edw. Not known

Edward Not known

Friday. 49

Dear Darwin

The shells which needed
describing are now described
shall I send you the MS.

The Conception Nucleus
I cannot satisfactorily identify
with any other. I prefer
to call it N. D'Orbigny's name
if you have no objection.
It comes very near some
lower & middle crustacean genera
I send the mod. wood.

I leave the Frago etc.
by W. S. S. S. Gives
L'Orbigny's supposed derivation
of it. It is however not in
a state sufficiently secure
for my conscience to lay
upon the horn.

The Terra del Fuego
fragments impress me with
the notion that they underlie
the Cretaceous epoch —
probably the early part.

Such also is the impression
I take up. (& more firmly
from the Cordillera of
Central Chili. I send the
MS. with the others. I

am now ready to see
Sowerby. ~~If he is to visit~~
~~coming tomorrow, I will~~
~~be in my office all Monday~~

Our survey reports are
now out. I wish I could
send you a copy of my
papers but we yet have
not been able to lay hands
on one for myself
Wm. Smith
David Shaw

Friday.

Dear Darwin

I have been too busy to look over your list with requisite consideration until yesterday.

I have marked on the list their probable depths judging from the associations of the genera. My marks are within wide range.

I could come however to more likely conclusions were two points noted
 1st - the average size of the specimens & how far in each locality.

2^d The comparative abundance
of specimens of each species
& their state, the intensity
life & death etc.
Thus the Heraps list might
indicate the depth
if the specimens are all very
small & the specimens of
large shells few.

All such calculations
at any rate, must be only
provisional, until we
know the range in depth
of molluscs in the
neighbouring seas.

E. fulvius Patagonia

3 *specimens* of *Perla*

2 — *Furca*

1 — *Pezomachus*

1 *Scabaria*

1 *Tumidula*

1 *Dorsolobula*

1 *Carbunculus* ?

Truncatella fragment of *Baliumidae*

1 *Senecella*

probably between
20 & 100 fathoms

S. Gouy Palagonia

~~Adiantum (same name as in forest long)~~

Trochilus

Tumidella

Raticia (same name as in forest for mosses)

Crepidula

Monticola ?

3 species of Maetia

Venus

Murex

Conchella (area)

Trigonalia (Pentameris)

Cardita

Cardium

Crepidula

Serpula

probably between 7 & 15 fathoms

- Bulla
- Dentalium
- Pleurostoma
- Fusus
- Turritella
- Venus

very common
 common
 common

La Serena Chile

- Natica
- Gastropoda
- Venus
- Mastra
- Lima
- 2 - Monoceros
- Pactonulites
- 2 - Volvuta
- Oliwa
- 2 - Pleurostoma
- Trochus
- 4 - Fusus
- 2 - Turritella
- Copis

- Pygaula
- Triton
- Ligasulites
- Natica
- 2 - Cardium
- 2 - Trochus
- 2 - Dentalium
- Part of a Trochus

probably
 between one & 10 fathoms

Cynops Chile - Cordillera

- Pecten
- Turritella
- Astarte
- Glycymeris
- Pecten
- Arvicula

Perhaps 30 or 40 feet

2. Tombulala

Cordillera Central Chile

- Glycymeris near Casabianca
- Arca near Galvache
- Trigonia near costata
- Thalysia longa
- Isocardia sub

Lower Pecten?
 found on mountains to lower
 level on the Cordillera of
 on one in breaching in last
epoch
10 or 20 feet

1. *Mantillus*
2. *Ancylloceras*. 9.
3. *Baculites* ~~Vaginalis~~. 88.
4. 5. 6 *Terna americana*. XX
7. *Gryphaea Darwinii*
8. 9 *Gryphaea* Nov. 4. ?
10. 11. 12. *Terebratula enigma*
13. 14. . var. of the same
15. 16. *Spirifer Chilensis*
17. 18. *Spirifer linguiferoides*
19. 20 *Terebratula inca*
21. *Lucina excentrica*.
22. 23. *Astarte Darwinii*
24. *Lucina americana*.

Completed list

"*Perna quadrata* of Phillips" (~~is~~
P. mytiloides Lamarck). Apparent not
 a correct identification. Best follows
 Mr. D'Arby & call it *P. americana*.
 Copeage

"*Terebratulida lens* Heringer" (a small
 species). Identification not correct.
 Species probably new.

"*Gryphaea Darwini* D'Arby" (Gyp.
 is certainly distinct from the *Lessoni*
f. incurva with which Mr. Sowerby
 has identified it. An intermediate
 form between *G. gigantea* (Marlstone)
 & *incurva* (Linn.).

"This history Mr. C. Sowerby. of *Cardinia*
 (perhaps allied to *Cardinia listeri*) but
 indeterminate.

Quasco.

"*Spirifer pinguis* Sowerby. *S. chilensis* M.
 - Does not appear to me to be *S. pinguis*."

Clare

"*Spirifer longifera* Phillips (Mt. Line) Mr.
 Sowerby. I don't admit this identification."

Conception:

The Baculites appears to be
certainly identical with the specimens
found in the Pondicherry beds (Lower part)

From Guasco, Maricongo, & his class. - and also from Iquique are specimens of the terebratula called "enigma" by M. D'Orbigny. The specimens from the three first localities are labelled "T. obsoleta" by J. Sowerby. That from the last he marks as "T. pleurodon".

From Copiapo there is also the same terebratula labelled "enigma" by M. D'Orbigny - & in this case "tetraedra" by Sowerby.

There is also a box of terebratules from Copiapo labelled "T. obsoleta Sowerby". M. D'Orbigny says, perhaps deficient & new.

All these terebratules I regard as one species, for which M. D'Orbigny's name had best be retained. At the same time many of the specimens are almost indistinguishable from our colitic T. tetraedra, & the variations among them are such as you find in that variable species. None of them can be safely referred to the form obsoleta.

Generally speaking the American specimens of enigma may be distinguished from the British tetraedra by the surface having the ribs sharp to the beak whereas in the British species they become obsolete & smoothed down. But this difference is not constant.

The "terebratula pleurodon" of Phillips with which Mr. J. Sowerby identified some of the specimens is a mountain limestone species of very near but distinct.

It is possible there are internal characters
which would distinguish the American ^{specimens}
from its European allies.

From Quasco is a *Terebratula* named
Synacina by M. D'Orbigny; some of the
specimens of which have been identified
by Mr. F. Sowerby with the mountain
limestone *T. haustata*, some with the
oolitic *O. ornithocephala* & some with
the oolitic *trigula*.

They are all evidently varieties of
one species.

It is very difficult to distinguish between
some of the specimens & *T. haustata*. It
is equally difficult to draw a line between
them & some Marlstone *Terebratulae*. With
a knowledge of the internal structure it
is impossible at present to decide on
their identity with similar forms in
Europe.

Among the local specimens is a
fragment of a *Flagostoma*? labelled
by Mr. Sowerby *O. molle* M. C.
The description in Mr. Mich. Condy's Des.
not accord with this identification.

Oliva -

Mullia.

like Mucc. defome

Key

Cypria!

Venus-like flexuosa

Matra

2 or 3 species

Gray

21 Nov 1836

Shelly Conchostoma

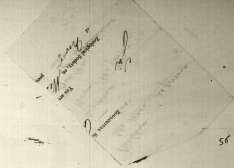
like Chel. 1836

large in the pair

on the surface?

Matra 2 or 3 species

Cypria -



56 56
a

Shelly limestone
like the 1st
found in the
on the surface?

They may name the same
shells
Gullia of like Buccinum
in form of horns

Materia 2 or 3 feet

Cyprina -

2nd fact - The Incaids & Spaniards
Pastor Buenos Ayres, at distances varying
from 1 to 6 leagues inland from the present
Shores of the River are found vast banks
of Marine Shells which are quarried for
lime; - in some places they are so
compact as to form a recent lime Stone
sufficiently hard for building, the Church
of Magdalena on the Coast for example
is built of it - on being first dry it
is soft & easily worked but it becomes
extremely hard after ^{long} exposure to the air

The following are some of the
Shells found in these beds of which

Have specimens - it's mostly very good enough to name them for me

Voluta Colocyntus of Tillwyn
Voluta Angulata — Swainson

Puccinum ~~baseosum~~ ^{of Portman. Kierulff} — Chemnitz ^{like}
* *Anticidium* ^{no. spec.} ~~baseosum~~ ^{Cochlidium}
~~baseosum~~ ^{ditto}
Oliva portula ^{by Sch. & Broussonet} — ^{Swainson} Swainson

Mastra? - or type new genus

same as } *Cytherea* ^{perhaps spec.} ~~baseosum~~ ^{no. spec.} —
(*Cytherea* ~~baseosum~~)

Venus flexuosa —

Ortue

Puccinum ^{of Portman & Kierulff}
L. — ^{Cochlidium of Chemnitz}

Juanillo Andii - same as 58

Therapsid skull

and/or with 3 Juanillo for

Class Therapsid - see Book

specimen for J. Felice. Tom

Tecton Dupuyouzi.

group belongs to Antenn. system

{ A.B. Dreyfus 1914 ~~1914~~
for Argentina 1/2 legs of wood

to the same place. Strom
about 1/2 of Antenn

^{specimen is empty}
different like one of Juanillo

Reynold Pencil - only 1/2 of Antenn

L.H. Pencil - 1/2 of Antenn

I had 1/2 of Antenn for

Central Antenn. 2 1/2 of Antenn

d' atop. facty.

(Allude to Lima Spine + Fakes)

h. 242 (east) Colombia, Antioquia valley

... to steps has common ...
... with the of the ...

Chilina Corbellera - steps of
Chilina Chalk of Surpa

James Menchiel in pattern
on record of basin of ... !!

Palaeontology

h. 62. Jurassic ...
J. ... - collected by ...

for see ... - near ...
+ first ...

J. ... also of ...
... with last
... of ...

Spelling

Nautical Dictionary

Transit of Venus in 1769
Humboldt

[Faint, mostly illegible handwriting]

[Faint, mostly illegible handwriting]

Upper Tens Chalks

2' alijay

Lower Chalk part + Upper green-sand

fault

fault

Horsham = { Lower green sand
Forks
Walden
2' alijay

Forks thick Walden etc
acton

Coeloceras } Cretaceous-oolite } 61

Embryos of Culex consist of - Pygostoma, Culex
Hippocampus of Spinifer & Podostoma
small oolite form

Spinifer

Pygostoma, Perna & Podostoma are
oolite form - so very common

Pecten & Imbricella

found

seen in Spinifer

Inspects Coeloceras Coeloceras Coeloceras
Chalk

A. M. ...
...
... 13/10/18...

B. ...
...
...

Monsieur,

Je vous envoie en suite de traverser le travail
relatif à vos fautes lorsque vous de vous
sont en ce genre. Je en bien regrette
à l'égard des observations générales et
je vous prie de venir par l'intermédiaire
de M. Peltier, comme pour me l'avez
demandé.

Après avoir vu, comme je le pensais
bien que votre magnifique collection de
Fossiles ne pouvait avoir d'autre destination
que d'être en Amérique. Les
différences qui peuvent se trouver
trouves à de fautes d'observation de
M. Loomis. Les fautes sont de

De même d'une autre manière on
général, comme ils se trouvent dans
avec les autres, les personnes, les personnes
sans cela ils peuvent donner des résultats,
tout a fait opposés avec les faits. Si
je ne leur fait beaucoup attendre pour
des déterminations, est-ce que je suis
en fait d'une manière ou l'autre possible
cela me demande des recherches.

Tous les jours, que je ne suis pas
satisfait de mes recherches, pour ce que
je ne suis pas de la même manière
peut-être. J'espère que vous ne perdrez
le retard, en faveur de mes études
qui me guident.

(Notes sur les études collectives, et
sur les méthodes de recherche, et
demandent une publication spéciale
pour me faire la même détermination)

car elle peut servir de base à l'histoire
 de l'Amérique Méridionale. Je suis engagé
 bien à faire faire des gravures de toutes
 les figures nouvelles, afin que toutes les
 et la mieux possible ^{la plus grande} ~~la plus grande~~
 de l'ind. Il serait bien d'autant que les
 figures futures représentées sur plusieurs
 pages et avec beaucoup de soin. De
 figures en plusieurs pages que certaines
 la même figure lui servirait également.

Je dois à votre collection de figures
 justifier une œuvre que j'ai commencée
 sur l'âge de quatre ans. Je
 j'ai placé dans le travail historique
 et qui figure dans l'ouvrage nouvelle
 est une dépendance des travaux
actuels.

Sans la suite je me suis beaucoup amusé
 avec vous par les soins des figures.
 Lorsque M. Corneille avait par exemple

Dans un nom donné à son sujet que
je suis devenu, qui son Drame les
drame une denominacion, mais
je n'y attache aucun importance. Le
nom de la couronne, par exemple, la
ou faire ce que vous voulez, y a les
qu'ils que vous faites, et pour ce
me intente avec vous les devenant
liberté de vous donner de
Honnêtes, indistinctement sur les de la
et sur l'indivisible.

Voici de suite, le volume premier
l'age de l'œuvre que je ne pourrais pas
d'après vos paroles. En commençant par
la plus inférieure:

Dernière géographie?

une partie de la condition de l'œuvre, l'acte
de quarante (et de) et la condition de l'œuvre

La cordillère centrale du Chili. La chaîne
centrale de la Sierra del Vucgo. La
Cordillère du Cerro pin. de Lisco.

Terres lunaires, ou terres altitudes

Concepcion du Chili. Cordillère de Copiapo.
Cordillère de Copiapo.

Terres patagoniques ou Terres inférieures

Sur l'océan atlantique. La Bajada de Santa Fe.
Cerro de San Yago. Cerro de San
Cristobal. Rivière de Santa
Cruz.

Sur le grand océan

Chilac (Chilo) Ibafo. Navidad
Cinquenta (Cinquenta inférieures et
supérieures). Snyla. La Muela.

Sur ces parties, on se trouve plusieurs autres dans
les terres altitudes et appartenant à ces
parties.

Examen Delaney sur de
L'opinion actuelle

Deuxième Partie. Maldonado.
Caguinbar (constit. Supérieure
de la Sainte.)

Vous voyez, parant apercevoir
l'opinion, dans votre œuvre, les détails
avec mon travail, que de cette
manière tout de suite sans aucune
indivision, et sans mélange.

Vous voyez dans vos paroles le
plus beau fait qui se communique pour
favoriser le mouvement. C'est
de la période qui a déterminé tout
l'ensemble. C'est un quinqué de
l'opinion. Les opinions sont, comme
dites, telles que les les nouvelles
s'écritent au hasard. Le monde

... ..
de cette classe d'hommes avant d'être
surtout les années séparées les différents
objets qui composent le groupe.
C'est un fait très commun.



Je trouve beaucoup de personnes
si le travail que j'ai fait peut vous
être utile, j'espère aussi que l'impulsion
de vos collections peut quelques jours
prolonger.

Je vous prie de m'écrire de temps en temps
pour me tenir au courant de vos
travaux.



Je vous prie de m'écrire de temps en temps
pour me tenir au courant de vos
travaux.

Je vous prie de m'écrire de temps en temps

Je vous prie de m'écrire de temps en temps



Monna
Charles Darwin
a Down (Bradley Kent
England)



Messieurs,

J'ai lu les ouvrages plus que je ne
l'aurais voulu à vous through la lettre de
determination de vos capitaines de la
Bahia Blanca, mais les circonstances
indépendantes de vos Colonies sont venues
me surprendre, malgré mon grand état de
votre voyage promptement à petit
travail, de sorte, je vous prie m'excuser
et ne pas me tenir de rigueur.

Contre le genre marqué d'une +
en marge, dont décrite par moi dans
la Sabotologie de mon Voyage. Celle
qui n'est pas en marge n'est

1
égales de voir dans les Mallouques
de son voyage, avec ses parents,
fraternelles et son épouse et son
deuxième.

Les autres en effet, les uns sont
les uns les autres et appartiennent
à la femme actuelle. Elles sont
communes pour l'usage, de même
que les autres, les autres, de la
Partie de son - Olat, et ont toutes
leurs indigènes savoir sur la même
base.

Les autres en effet de l'Uruguay, elles
sont toutes, et ont aussi les
autres savoir sur la côte.
elles sont toutes les deux de même
dans les Mallouques de son
voyage, et ont la même importance sur ce
territoire.

Je vous remercie beaucoup, Monsieur, de
 l'attention que vous voulez bien me
 faire sur les propositions avec lesquelles
 je pourrais correspondre pour avoir
 des feuilles d'Angleterre. Je vous en envoie
 à présent une double, et je tiens
 vos deux articles en leur attendant
 des collections de feuilles. Si en attendant
 que je vous envoie quelques uns de ces
 je vous prie me dire, s'ils sont bons,
 à accepter une proposition.

Si vous avez quelques doubles de ^{feuilles}
 de Falkland, ils me seraient bien
 utiles pour mes publications futures.

Je vous prie, Monsieur, d'être
 instruit de mes sentiments avec lesquels
 j'ai l'honneur à être

Votre très humble serviteur

Paris le 31 Janvier 1766.

Made W. Orléans

Penis alyca se trouvent maintenant vivans dans la mer
Noire. Ils appartiennent toutes à mon espèce *obovata*.
(Voyez ce que j'ai dit à cet égard sur plusieurs des Montagnes)
~~avec~~ *Penis alyca* se trouvent. (C'est maintenant *obovata*)

- *Buccinum globulosum*, D'Orb. Cat. p. 157.
 (D'Orb. de. Buccinum) vient en Patagonie
- *Olivancularia avicularia*, D'Orb. — — — p. 156
 Elle se trouve sur les côtes de l'Amérique du Sud
- *Venus flexuosa*, Lam. vient à Madagascar
- *Azara labiata*, D'Orb. 1839. Cat. p. 7 p. 20-21
 (*Stomatopoda labiata* Lam.) vient à Buenos Ayres
- *Urosalpinx*, D'Orb. (Mollusque). Espèce vivante
 en Patagonie.
- *Cytherea* (Mollusque) elle se trouve en Patagonie
- *Murex Nabelii*, D'Orb. (vient à Maldonado)

Maldonado.

Penis alyca sont de même âge que les *Penis alyca* de la mer
Noire. Ils appartiennent toutes à mon espèce *obovata*.

- *Azara labiata*, D'Orb. p. 7 p. 20-21
- *Solen caribaeus* Lam. (vient à Maldonado) Cat.
- *Stomatopoda Nabelii*, D'Orb. Mollusque de l'Amérique du Sud.
 (espèce vivante en Patagonie)
- *Mytilus suliformis*, D'Orb. Cat. p. 162.

Bayida de Santa Fe

Vous ne faites apparemment à des espèces nouvelles
et comme il est évident aux espèces précédentes
comme la esp. M^e Larrey by les de fustes, détermination,
C'est une testaceo baryogonice

(569) Clusia patagonica ¹¹² L'Esp. Nat. de Linn. Mus. H. 7 / 10-16
(non C. ~~patagonica~~ - var)

(570) C. — Alvarezia ? Esp. H. 7 / 19
(non C. Alvarezia, var)

571. Clusia parviflora ? Esp. H. 7 / 39
— Clusia nana

572 573 — Voussia Münsteri ? Esp. H. 7 / 10 11. non Voussia Münsteri var

D Clusia glauca
Clusia ~~glauca~~ brasiliana ? Esp. 11 52. Clusia ~~brasiliana~~ brasiliana

579. Clusia ~~brasiliana~~ brasiliana ? Esp. H. 14 / 11-17
— Clusia ~~brasiliana~~ brasiliana

Le fait de cette localité tout en différents espèces figurant
de l'avis de l'autorité. On paraît avoir appliqué à
la même espèce ~~différentes~~ à Montevideo Patagonie

Uria alata Coccyzus alata Linn n° sp

5 Mucuta ornata, Linn n° sp

Scolecus parvirostris, 3^e Ed. 117 (non Spex)

6 Scolecus centralis Linn n° sp

Urrutella ambulacorum, Linn n° sp. Ce n'est point

la même espèce que celle qui passe en sous à Urrutella
Cruz. Il faudrait nommer celle-ci et je propose

à son nom de Urrutella ~~Cruzii~~ patagonica, 3^e Ed.

Cost. San Juliano, Patagonie

(798) Scolecus n° sp (non centralis)
Scolecus centralis, Linn n° sp.

10 Scolecus juvenalis Linn n° sp.

11 Fusus Noachinus, Linn n° sp

12 Scaloria rugosa, Linn n° sp

13 Palanus varians, Linn

14 Scolecus lamprosus, 3^e Ed. 117 (non Scolecus Spex)

15 Urrutella patagonica, 3^e Ed (non Urrutella variabilis Linn,

16 Urrutella ambulacorum, Linn n° sp

17 Fusus Vosini mais peut être pas identique au F. lamprosus
(Murex lamprosus Linn)

Santa Cruz Catalogue

Cette série de fossiles se trouve dans les mêmes conditions que celle de son jalon, et du bas de lui: (c'est une zone paléogène). M. Leveillé a une certaine ressemblance de ceux de Naples au Chili. Seulement je ne partage pas avec lui l'identité de la Voluta alta et de la Natica solida, ce sont des espèces distinctes. Mais je trouve cette identité parfaite avec le Prochus collaris, le même en fait que son Prochus dans

- 10 Voluta Non Voluta alta de Naples. C'est une espèce distincte
- 11 Prochus collaris, Sow. N° 5p
- 12 Natica cruziana, d'Orb. (Non la même que la Natica solida de Naples au Chili.)
- 13 Pecten meridionalis, d'Orb. (non Exaltata dans les plantes)
non décrites
- 14 Nucula glabra, Sow. N° 5p
- 15 Macla rugata, Sow. N° 5p
- 16 Strophomena ornata N° 5p
- 17 Urrutella ambulans, Sow. N° 5p
- 18 Crepidula gregaria, Sow. N° 1p. Les groupes de cette espèce sont rapportés à l'état fossile, comme ils ont été, et comme nous avons le Crepidula detabata de Callao, c'est le plus beau fait qui se rapporte pour prouver que ces fossiles ont été détruits par un mouvement subit, car il n'y a pas eu aucun adhérence. Il est évident de la ligne sur l'état postérieur le mouvement subit de leur état des restes et les volutions qui les a accrues.
- 19 Cucullia (Arca) alta Sow. N° 5p
- 20 Digamocella instillata, d'Orb. (Digamocella dans Sow) N° 5p
alta espèce manque de l'Arca Digamocella dans

*Arca de la 18e
de la 19e page*

- 72
- Carista palagonica, Orb. n^o sp. non descriptis
- Mactra Darwini, Orb. n^o sp. non descriptis
- Mactra meridionalis, Orb. n^o sp. non descriptis
- Cardium pulchrum, Orb. n^o sp. non descriptis
- Tridacna Lyelli, Orb. n^o sp. non descriptis

Concepcion du Chili 73

C'est rapporté ~~les~~ les fossiles de cette localité, on connaitrait point le Nautilus, & le Baculites, au Terrain tertiary, mais pour qu'à l'avenir fut de cette époque il faudrait supposer que les Baculites y existaient aussi, ce qui ne paraît douteux. Je préfère croire que cet ensemble est crétacé.
Ainsi je me serais trompé sur l'âge de ce terrain.

En ce qui rapportant au terrain crétacé, je crois qu'il dépend de la crin chionite, ou du terrain crinifère (salinologique français) - c'est au moins ce que j'aurais pu en tirer la comparaison zoologique de cette Terre.

168 169
171. 166

- Grigonia hanstiana, Orb. Salin. d. l'Am. fl. 12 p. 14-15. (Non G. rudosa Sow.)
- 36 Baculites Lyelli, Orb. n^o sp. Elle diffère du Baculites verbeurii avec lequel on la mal a comparé rapporté par la teneur de la rigueur ventrale, cette partie étant incurvée dans le B. verbeurii.
- 39 Nautilus simplex Sow. non doute nouvelle espèce, auquel pas le simplex Sow.
- Mactra araucana, Orb. Sal. fl. 15 p. 3-4
- Mactra australis, Orb. Sal. fl. 14 p. 3-4
- 40 sectus Dunajewi Müller.

Scalana
+ 2. Retica
Fusus
Pygmaea
Pleuronotus
2. Cardium
vener
+ 2. Mactra
Arca
Nucula
2. Pecten
Diplommatina
Nautilus
Pecten
+ Ammonite

Les feuilles sont réunies en paquets de quatre sous
de leur base les testes (patagones), piqués, offrent
complètement l'air de jeunesses, en l'absence.

Artoria (jeun. Nov.)

Yanus n^a sp.Maetia n^a sp.Simia n^a sp.Monoceras n^a sp.Actinotulus concyphomeris, 2 Orb. (non Pectinotulus super)Monoceras exim, 2 Orb. (non jeune Naumanni (Zetvedius))Voluta alta Linn n^a sp.Voluta triplicata, Linn n^a sp.Oliva sinuata, Linn n^a sp.Neurotona discors, Linn n^a sp.Neurotona verbintholkei, Linn n^a sp.Trochus collaris, Linn n^a sp. { T. solani (jeune)
T. vari (adulte) }

C'est à cet âge que l'on trouve

Tanus regularis, Linn n^a sp.Corvula chilensis, 2 Orb. (non Corvula concyphora Desh)Corvula latirostris, Linn n^a sp.Fusus trochiformis, Linn n^a sp.Callis monilifer, Linn n^a sp.Fusus pyruliiformis, Linn n^a sp.Sipula distans, Linn n^a sp.Orthis verruculosa, Linn n^a sp.Argulus subglobosus, Linn n^a sp.Natica solida, Linn n^a sp. diffère de Natica

de Santa Cruz.

Cardium (n^a sp.) Linn le nom de Corbis beringata,Cerebra undulifera, Linn n^a sp.C — costellata, Linn n^a sp.

- 11 Dentalium subrotundum, Linn. n^o sp.
 12 Cardium multiradiatum, Linn. n^o sp.
 13 Dentalium giganteum, Linn. n^o sp.
 14 Fusus regularis, Linn. n^o sp.

76 8

Cogumbo conchus inferiorum 77 8

(*Salvadora de Linnæus dans l'espèce*)
 Ces espèces, comme je l'explique det., ont toutes de la parenté
 ancienne de nos Venus testacées portugaises, car
 toutes toutes les espèces sont - les, dans le
 même conditionnement physique, existent plus
 dans les mêmes pays.

- (1) Lupin donne comme Venus opaca, a toutes de
 beaucoup de bonne nature pour y être réunis, elle
 est en tout semblable à l'état pur qu'on peut voir
 en détail.

Lupina chilensis, 2^e Orb. Ce n'est pas, autant les Venus
concentrica des Présid. Erreur de détermination.

Natica (non déterminable) ce n'est certainement pas
 la Natica duplicata de Wood

Venus Gaudichaudi, 2^e Orb. Pl. 18 f. 16-18, a été par
 la Venus maculata, comme la conch. de Donovig
 7^e in pl. qu'il sont les caractères différenciels
 en la décrivant.

- 72 Bulla ambigua, 2^e Orb. Pl. 12 f. 1-3. (Non Bulla
hydati.) facile détermination.

Caracum Auea, 2^e Orb. Pl. 13 f. 14-15. (non
Caracum rubi Linn. n^o sp.)

Monoceros Blaculata, 2^e Orb. Pl. 6 f. 18-19

Lanopoca cogumbensis, 2^e Orb. Pl. 13 f. 7-8

Chiloe (île de)

78

24

Plus de fossiles ne parviennent à nous appartenant à nos
 levans ~~patagoniens~~ Elles diffèrent totalement de ~~elles~~
~~patagelles~~ qui vivent aujourd'hui sur la même île.

Valoniella oblonga, d'Orb. (Collanites oblonga Sow) n° 5p.

Cytherea heliculosa Sow. n° 5p.

526 Natica elongata, Sow. n° 5p.

Natica pumila, Sow. n° 5p.

Huafé île du Chili

Les fossiles trouvés dans la même collection que ceux
 de Chiloe, sont de levans Patagoniens.

53 Bulla cosmophila, Sow. n° 5p.

54 Dentalium magus, Sow. n° 5p.

55 Clavelina subaqualis, Sow. n° 5p.

Fusus Cleryanus, d'Orb. Pl. 12. f. 67. (Fusus subaqualis)
 Sow.

56 Turritella Huafensis, d'Orb. n° 5p. var. Turritella
lingulata.

57 Venus n° 5p.

Cogumbo Couches intermédiaires.

Ces couches sont marquées par l'existence de
trois testicules, ainsi Salagimars. Elles
se trouvent aussi que des espèces non videntes
dans les zones voisines.

Sectus n° 1p.

Acuma n° 1p.

Monoceros Blauschilii, 2 Esb. pl. 6 / 18, 19 (non)

Monoceros sarcophagus, Lam.

Monoceros voisins, mais non identiques au

III Crabulabrum, Lam.

Balanus

Cogumbo Zone Supérieure

Fossiles en espèces, bien différentes de deux zones inférieures,
appartiennent toutes à l'époque actuelle, ou, ~~elles~~
~~se trouvent~~ se trouvent actuellement dans
les zones voisines.

Balanus purpuraceus Lam. K. (vivant actuelle)

Amphiderma regulatum (vivant à Anzi)

Yenus Dombrovi, Lamarek. 2 Esb. pl. 160
(vivant à Valsparaso)

Purpura Nitidostoma, vivant à Valsparaso.

Calyptra caduca
dentata regulata
similifera
nitidostoma
Nitidostoma, Lam.

N^a ~~jeune sur roche~~

Payta (Peru)

Lectus Ce terrain est connu, je crois, sous le nom de terres patagones (terres inférieures)

Plectonculus paytonis, Orb. Pl. 18 fig 11-12

(Non Plectonculus transversus, Lam.)

Cordillera de Copiapó

Tu serais pas va le terrain, je me fais que donner mon opinion relative ^{aux fossiles} ~~au terrain~~. Il paraîtrait y avoir deux espèces distinctes (une ~~peut-être~~ ^{peut-être} être une espèce des terres cristales, peut être du terrain barrois (ou chilotes), l'autre pourrait être gastropode sans que ce soit nécessairement une spèce nouvelle. Les fossiles suivants peut-être être évidemment du terrain cristallin.

N^o 1 Serie

59. 61. Solen Dufrenoyi, Orb. Pl. 11 20 f 87.

60. 61. 110

Trochilites Andii, Orb. 1899 Pl. 6 f 11
Asteris Bonini d'Orb. no. 2. (non Asteris Bonini ^{Orb.})
Pericoma var. 4. (non Pericoma echinata Orb) peut être gastropode

N^o 2 Serie

Les fossiles qui suivent peut-être être appartenir au terrain Oxfordien. ? ont-ils ?

62 64

Gryphaea Darwinii, Orb. (Non Gryphaea Darwinii Lam.)
Non Gryphaea incurva Lam.

Soma americana, Orb. N^o Sp. (Non Soma quadrata Phillips var.) Elle lui ressemble pour la région postérieure plus saillante.

152
07

Cochlostola conigua, J. Orb. Pl. 21 p. 10-12.
(Non Cochlostola, ~~obsoleta~~.)

Cochlostola nomine du C. obsoleta Linn. non
pote esse differre.

07 indeterminata (non Perisporis)

Orna de S^r Joseph

Fossas fideles deos de omni age que deus de la Bayada
de Santa Li. ^{elles appartenant à deux sections portugaises}
et se trouvent par toutes sur les côtes occidentales.

(- Orna portugica, J. Orb. Pl. 7. p. 10-11.
Non Altenaria Linn. non.

(18^o 1^o - Orna alvazguis, J. Orb. Pl. 7. p. 11)

(18^o 2^o - Orna parvioris, J. Orb. Pl. 7. p. 11) (N^o 18^o 2^o se rapporte à un autre
genre connu en le rapportant au Orna espèce par ses
caractères distincts.)

(18^o 3^o - Orna Lavergeyi, J. Orb. Non sp. (Non seulement se voit
par une variété de Orna espèce, mais est une espèce distincte
de la précédente facile à reconnaître.)

(18^o 4^o - Orna Dawsonianus, J. Orb. Pl. p. 133. (N^o 18^o 4^o change
le nom de Orna pour Orna.)

(18^o 5^o - Orna portugica, J. Orb. Pl. p. 133. Ce n'est pas le C.
obsoleta Linn. mais bien une espèce nouvelle.

Déjà le spécimen ou plusieurs autres qui intéressent
appartiennent au lieu, même la première de
Ceribatula cubici, un fossile-ovaire qu'il y
a les milieux de divers formations
Spécimen cubici. ^{8. 2. 1839} Des. non sp. pinguis Des. n. 2. f.

~~Ceribatula sp. f. (non f. ov. long.)~~

Ceribatula ignaviana, Des. 81. 92 fig 1619 (non

(non craythocapitata.)

af Des. (non f. septulata Des.

8 id. = (non f. lingulata Des.

18 19) (non f. partata, Des.

Ceribatula cubici, Des. 1839

97) ~~Ceribatula signata, Des. 81. 92 fig 1612.~~
~~(non Des. plumbosus, Shell)~~

Ce terrain semble dépendre de la série N° 2 de la
Cordillera de Copiapó. Ce terrain peut être la
même explication, voir le lieu

Ceribatula forme de la C. absoluta Des

Toutes ces espèces ont paraitre diffuses de l'Espagne et de l'Italie.
 Les autres sur la même côte et appartenant au genre
 à deux bords paléogènes. Le double de l'un de ces
 qui existent en l'É. laoulaine, mais y en recouvrent
 par l'absence parfaite. Les doubles et plus marqués
 dans l'ave de l'É. il noir et l'paléogènes.

Cordellera du Ponce

Cri de Passé.

Ces fossiles paraissent être appartenant au genre
Neocomien de France.

Ammonites lasensis, 2^e Orb. N^o Sp.

Astarte americana, 2^e Orb. N^o Sp.

Cordillera central du Chili.

87 12

D'après les fossiles, ce terrain serait une dépendance du
Terrain micocène, et ~~le~~ terres, des terres crétacées
supérieures.

Cuba (67) Gryphaea = Fossilis de Gryphaea Castro, des terres
752 micocènes, de France et de Neuchâtel.

Cuba 750. Arca form de Arca gabrielis, d'Orb (Paléontologie
française) de terres micocènes.

612. Natica (indéterminable.)

619. Ammonites indéterminable. terres de l'A
recticostatus, d'Orb (Paléont. française) Butterley
Neocomien.

614. { Cyprina rostrata, d'Orb. Paléont. franç. terres
B { Neocomien, (avec lucine)

A. Porolithon angulata, d'Orb. Paléont. de l'Am. sept.
8119 f. 4 ?

C Louisa ?

Cordillera de Pajumbo (Chile)

R. Class

Lepus de la cordillera de Pajumbo que se ven en Copiapo
Anno 1821 de la Cordillera de Pajumbo

78, 785, 787, 972

Cecten Duffrenoyi, 2 Verb. St. 22 f. 5. 7.

83, 786

Ostrea hemisphaerica, 2 Verb. St. 22 f. 3. 4.(non gryphaea reticulata.)

C. Class

777

Gryphaea ^{insculpta} indidionensis (non Lagys senilis Sav)

C. Class

948

Strophodontes chilensis, 2 Verb. St. 22 f. 16. (non orthocentrus)~~Strophodontes Duffrenoyi, 2 Verb. St. 22 f. 16. (non Strophodontes)~~Lepus parvulus parvulusR. Class
977Spizella spizella spizella~~Spizella spizella spizella (non Spizella senilis Sav)~~

No 132

Trochilata senilis d'Orbigny 22 f. 10-12(non Trochilata senilis) (est elle spizella a l'air?)

~~37~~ ~~Valencia americana, 2 Orb. N. 1.~~

89 16

Mochia (chile)

Les petites démontrent un terrain Chilien, del lago
de Chilcaes (p. lago) ^{ou} del lago de Misaf.

Turritella americana, 2 Orb (non Turritella Complanata)

36f Fusus.

Venus.

Iguazua (Pese)

no 40

(vicia forte)
Turritella 2 s. d' Orb (non T. lens Harizon)

39

~~-----~~
Turritella magna d' Orb 11 22. / 10-12
(non var. pleurodon Thériz)

38

Lacina americana d' Orb 2. 14.
A. 14.