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# Newly collected Ammonites from the Jurassic-Cretaceous Somanakamura Group

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**Abstract.** The knowledge on the Jurassic-Cretaceous ammonite fauna from the Somanakamura Group has considerably increased by the recent discoveries. The new collections include both new forms hitherto unknown and well preserved specimens of already described species. The newly collected species are briefly described and their localities and stratigraphical horizons are listed in this paper.

The Jurassic to earliest Cretaceous formations of the group from which these collections were discovered are distributed on the eastern flank of the Abukuma Mountains, and the general stratigraphy has already been established. The formations contain rather rich fossils, including ammonites, corals, stromatopores, bivalves and gastropods. Up to now, 14 species of ammonites were described and illustrated, besides 12 others simply cited without description nor figures. Almost all the species hitherto described are poorly preserved. Moreover, the composition of the cited fauna is sometimes not thoroughly consistent, presumably comprising of species of different stratigraphic horizons.

Recently some 300 ammonite specimens have been collected from the Nakanosawa and Koyamada formations by some of the co-authors (C.S., Y.Y., M.T., Y.A.). Thanks to well preserved specimens, more advanced paleontological study is made possible. At least three new species (*Dalmasiceras*, *Aulacosphinctoides* and *Subdichotomoceras*) and two new forms hitherto unknown (*Hybonoticeras* and *Haploceras*) are included. Others belonging to the already known species are also quite useful for confirming past identifications.

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## 図版説明
## Explanation of Plates

### 図版 1　中ノ沢層産アンモナイト化石 1
### Plate 1. Ammonite fossils from the Nakanosawa Formation, no. 1

1a, b. *Aulacosphinctoides* sp. nov. macroconch, ×0.8. Specimen #349. North side cliff of the Kamimanogawa River, Koike. M. Taira coll.
a: Lateral view, b: Ventral view

2. *Aulacosphinctoides* ? sp. Senile fragment, ×0.8. Specimen #112. 50m upstream from the Tachimi-ishibashi Bridge of the Kamimanogawa River, Jisabara. M. Taira coll.

3a, b. *Aulacosphinctoides* sp., ×1. Specimen #61. A limestone quarry, Tomizawa. Y. Ara coll.
a: Lateral view, b: Ventral view

4. *Aulacosphinctoides* ? sp., ×0.8. Specimen #104. Fukono-Nakayama Forest Road, Fukono. M. Taira coll.
5. *Aulacosphinctoides* sp., ×1. Specimen #98. North side cliff of the Kamimanogawa River, Koike. M. Taira coll.
6. *Aulacosphinctoides* sp., ×1. Specimen #111. Fukono-Nakayama Forest Road, Fukono. M. Taira coll.

### 図版 2　中ノ沢層産アンモナイト化石 2
### Plate 2. Ammonite fossils from the Nakanosawa Formation, no. 2

1a, b. *Subdichotomoceras* sp. nov., ×0.8. Specimen #138. South side slope of the Manogawa River, Oyama. C. Suzuki coll.
a: Inner mold, b: Outer cast

2a, b. *Subdichotomoceras* sp. nov. microconch, ×1. Specimen #71. Fukono-Nakayama Forest Road, Fukono. Y. Yamaki coll.
a: Ventral view, b: Lateral view

3. *Subdichotomoceras* sp. nov., ×1. Specimen #141. South side slope of the Manogawa River, Oyama. C. Suzuki coll.
4. *Holcophylloceras* sp., ×1. Specimen #170. Kabesu Forest Road, Koyamada. M. Taira coll.

### 図版 3　中ノ沢層産アンモナイト化石 3
### Plate 3. Ammonite fossils from the Nakanosawa Formation, no. 3

1. *Subdichotomoceras* sp., ×1. Specimen #69. Fukono-Nakayama Forest Road, Fukono. Y. Yamaki coll.
2. *Subdichotomoceras* sp., ×1. Specimen #62. North side valley of the Fukono-Nakayama Forest Road, Fukono. Y. Ara coll.
3. *Subdichotomoceras* sp., ×1. Specimen #65. Fukono-Nakayama Forest Road, Fukono. Y. Yamaki coll.
4. *Subdichotomoceras* sp., ×1. Specimen #67. Fukono-Nakayama Forest Road, Fukono. Y. Yamaki coll.
5. *Subdichotomoceras* sp., ×1. Specimen #242. Fukono-Nakayama Forest Road, Fukono. M. Taira coll.
6. *Pachysphinctes* sp., ×1. Specimen #130. Tatenosawa Forest Road, Koike. Y. Ara coll.
7. *Pachysphinctes* sp., ×1. Specimen #60. North side valley of the Fukono-Nakayama Forest Road, Fukono. Y. Ara coll.
8. *Pachysphinctes* sp., ×1. Specimen #102. South side slope of the Kamimanogawa River, Koike. K. Taira coll.

### 図版 4　中ノ沢層産アンモナイト化石 4
### Plate 4. Ammonite fossils from the Nakanosawa Formation, no. 4

1. *Haploceras* sp., ×1.5. Specimen #134. A limestone quarry, Tomizawa. Y. Ara coll.
2. *Haploceras* sp., ×1.5. Specimen #99. North side cliff of the Kamimanogawa River, Koike. M. Taira coll.
3. *Haploceras* sp., ×1. Specimen #133. Tatenosawa Forest Road, Koike. Y. Ara coll.
4. *Haploceras* sp. juv., ×2. Specimen #110. Kabesu Forest Road, Koyamada. M. Taira coll.
5. *Taramelliceras* sp., ×1.5. Specimen #135. Tatenosawa Forest Road, Koike. C. Suzuki coll.
6. *Taramelliceras* sp., ×1.5. Specimen #173. Kabesu Forest Road, Koyamada. M. Taira coll.

7. *Taramelliceras* sp., ×1.5. Specimen #63. North side valley of the Fukono-Nakayama Forest Road, Fukono. Y. Ara coll.
8. *Aspidoceras* sp., ×1. Specimen #146. South side slope of the Manogawa River, Oyama. C. Suzuki coll.
9. *Pseudowaagenia* ? or *Pachypictonia* ? sp., ×1. Specimen #143. South side slope of the Manogawa River, Oyama. C. Suzuki coll.
10. *Pseudowaagenia* ? or *Pachypictonia* ? sp., ×0.8. Specimen #140. South side slope of the Manogawa River, Oyama. C. Suzuki coll.
11. *Hybonoticeras* sp., ×1.5. Specimen #137. Tatenosawa Forest Road, Koike. C. Suzuki coll.
12. *Hybonoticeras* sp., ×1. Specimen #182. Tatenosawa Forest Road, Koike. M. Taira coll.

13a, b. *Hybonoticeras* sp., ×1.5. Specimen #156. Tatenosawa Forest Road, Koike. M. Sasaki coll.
a: Lateral view, b: Ventral view

**図版 5 小山田層産アンモナイト化石 1**
産地はすべて鹿島町小山田ウマ沢

**Plate 5. Ammonite fossils from the Koyamada Formation, no. 1**
All specimens are from the Umasawa River, Koyamada.

1. *Spiticeras* sp. juv., ×1.5. Specimen #114. M. Taira coll.

2a, b. *Berriasella akiyamae* Sato, ×0.8. Specimen #115. M. Taira coll.
a: Outer cast, b: Inner mold

3a, b. *Berriasella akiyamae* Sato, ×0.8. Specimen #116. M. Taira coll.
a: Outer cast, b: Inner mold

**図版 6 小山田層産アンモナイト化石 2**
産地はすべて鹿島町小山田ウマ沢

**Plate 6. Ammonite fossils from the Koyamada Formation, no. 2**
All specimens are from the Umasawa River, Koyamada.

1a, b. *Berriasella akiyamae* Sato, ×1. Specimen #119. M. Taira coll.
a: Lateral view, b: Ventral view

2. *Berriasella akiyamae* Sato, ×0.8. Specimen #117. M. Taira coll.

3a, b. *Berriasella akiyamae* Sato, ×1. Specimen #121. M. Taira coll.
a: Inner mold, b: Outer cast

4. *Berriasella* sp., ×1. Specimen #120. M. Taira coll.
5. *Berriasella* sp., ×1. Specimen #122. M. Taira coll.

**図版 7 小山田層産アンモナイト化石 3**
産地はすべて鹿島町小山田ウマ沢

**Plate 7. Ammonite fossils from the Koyamada Formation, no. 3**
All specimens are from the Umasawa River, Koyamada.

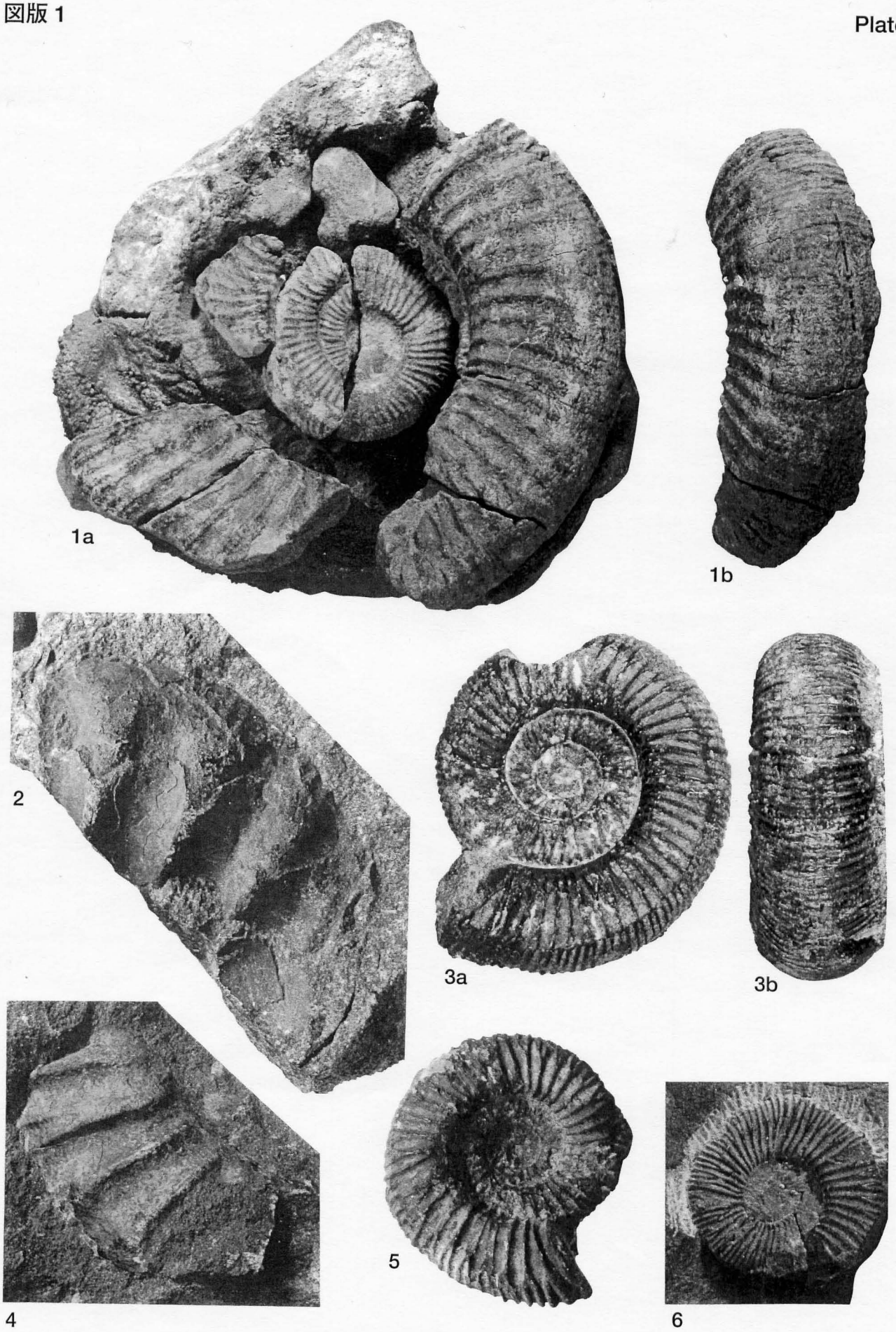
1a, b. *Dalmasiceras* sp. nov., ×0.8. Specimen #113. M. Taira coll.
a: Outer cast, b: Inner mold

2. *Substeuerocerasa* ? sp., ×1. Specimen #123. M. Taira coll.
3. *Kilianella* sp., ×1.5. Specimen #144. M. Taira coll.

4a, b. *Parakilianella umazawensis* Sato, ×1. Specimen #124. M. Taira coll.
a: Outer cast, b: Inner mold

図版 1

Plate 1



図版 2

Plate 2

1a

1b

2a

2b

3

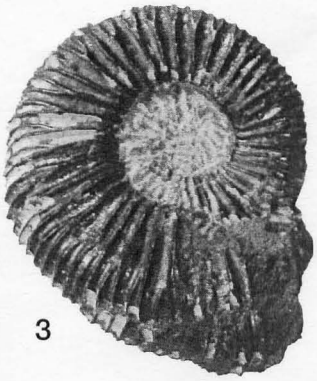
4

図版 3

Plate 3

1

2



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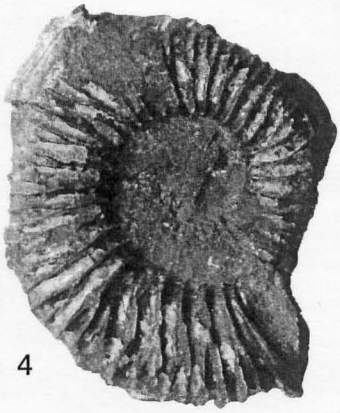

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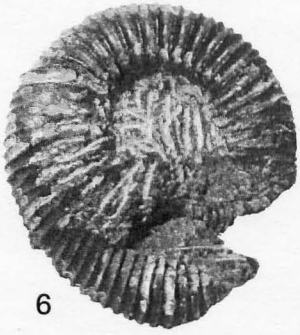

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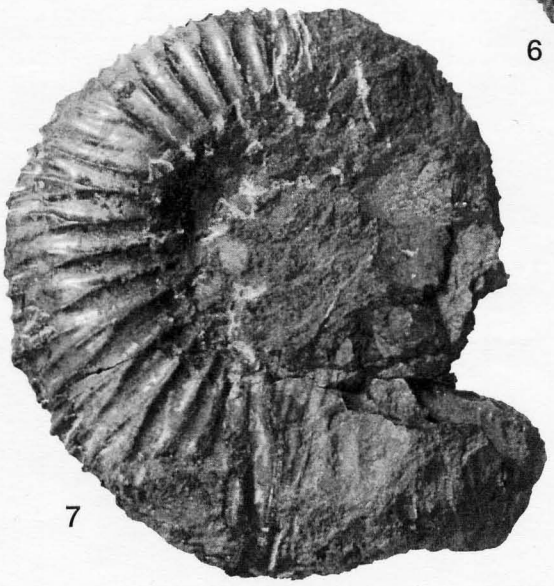

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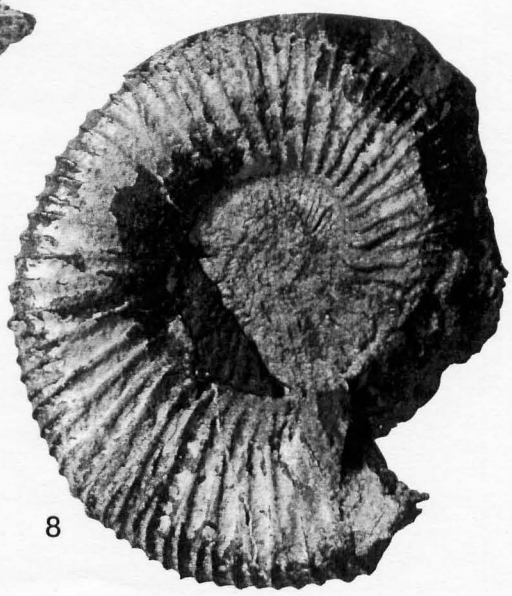

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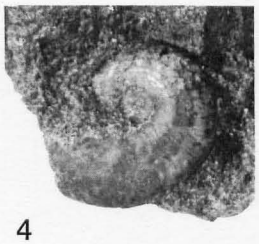
図版 4　　Plate 4


1


2


3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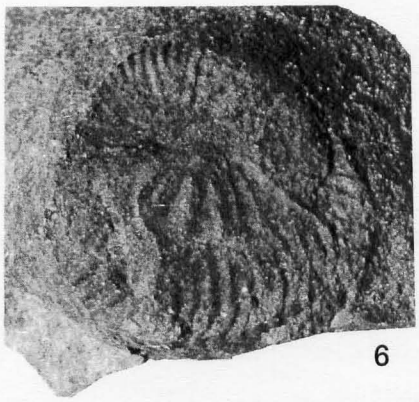
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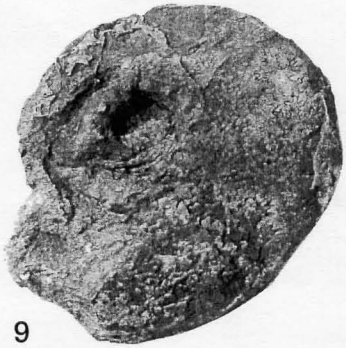
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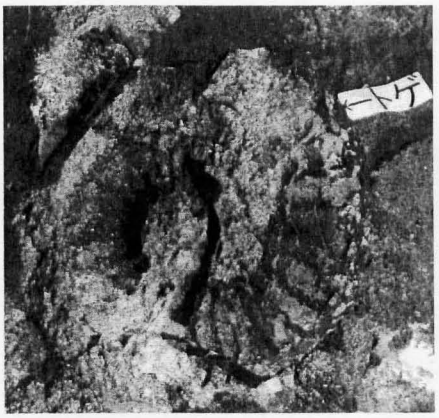
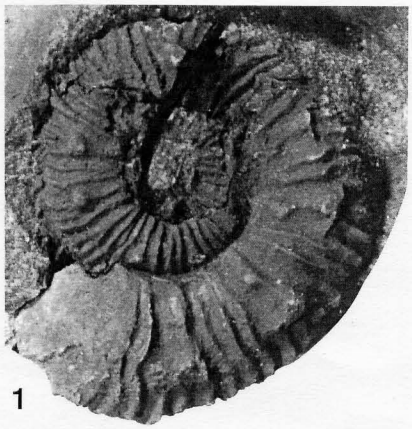

13a


13b

図版 5

Plate 5



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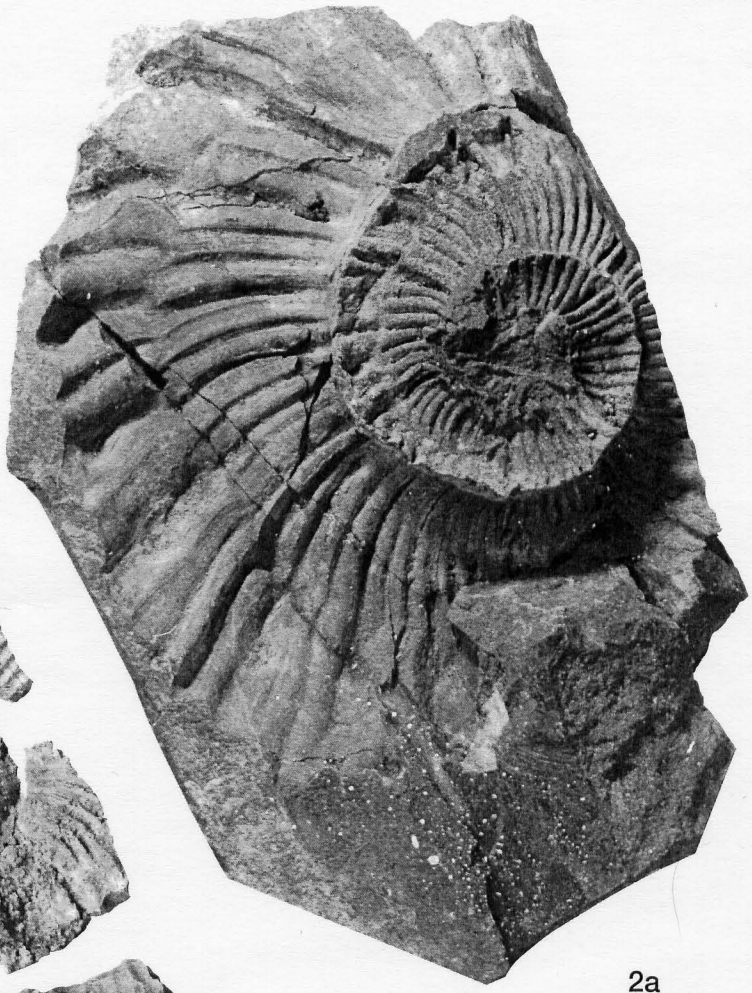

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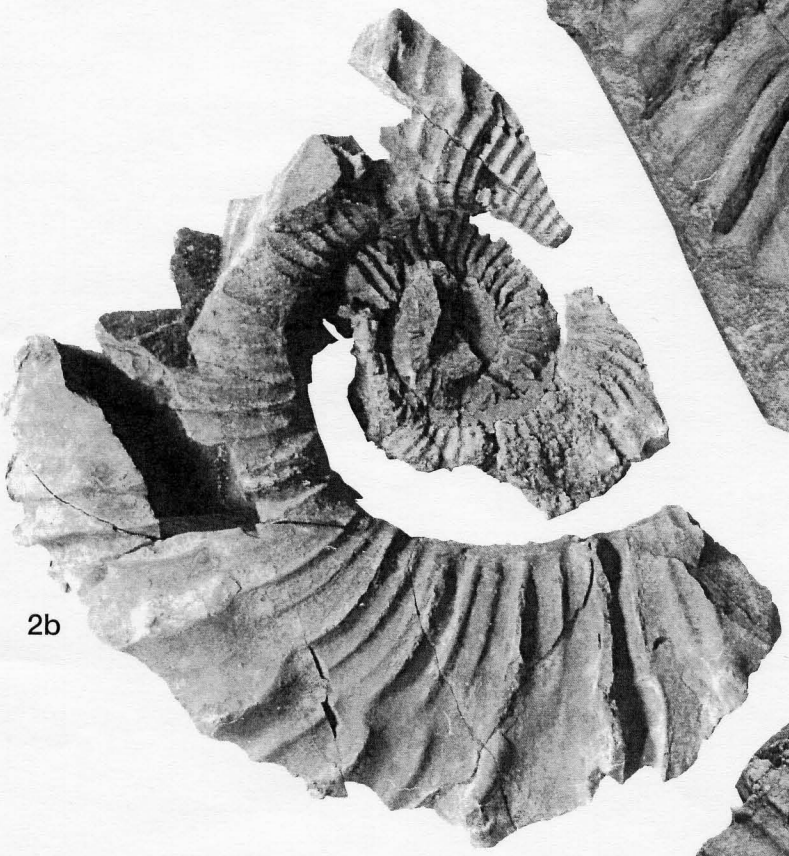

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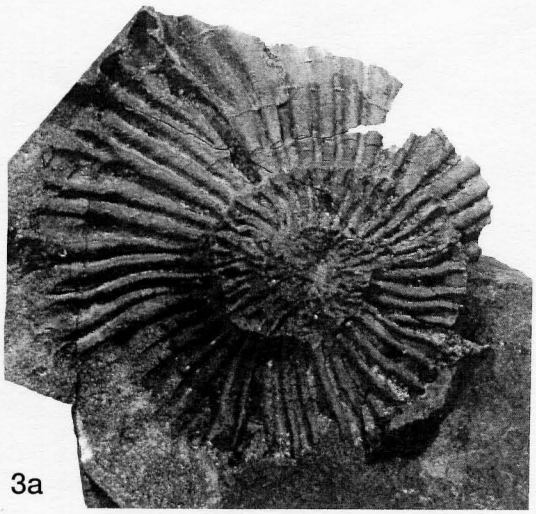
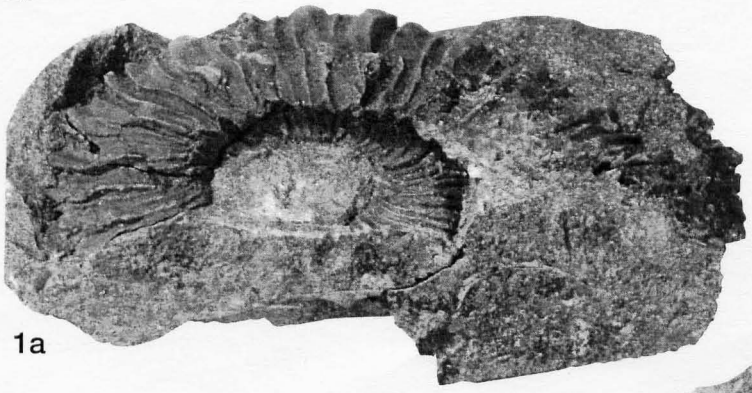


3a

3b

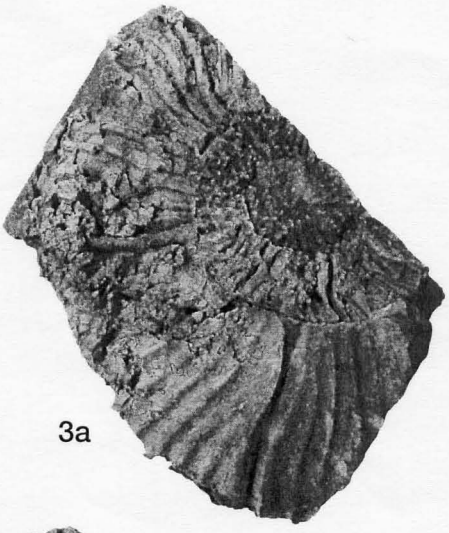
図版 6　　Plate 6



1a

2

1b



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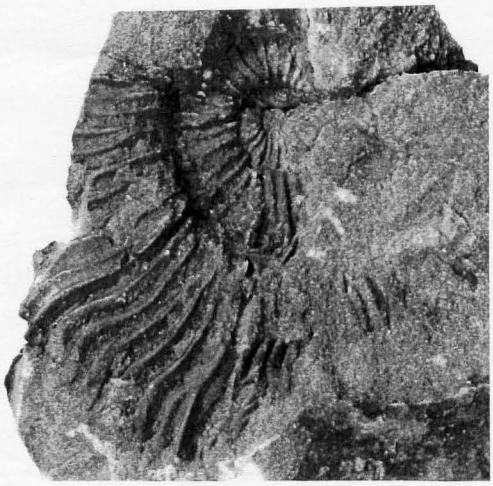

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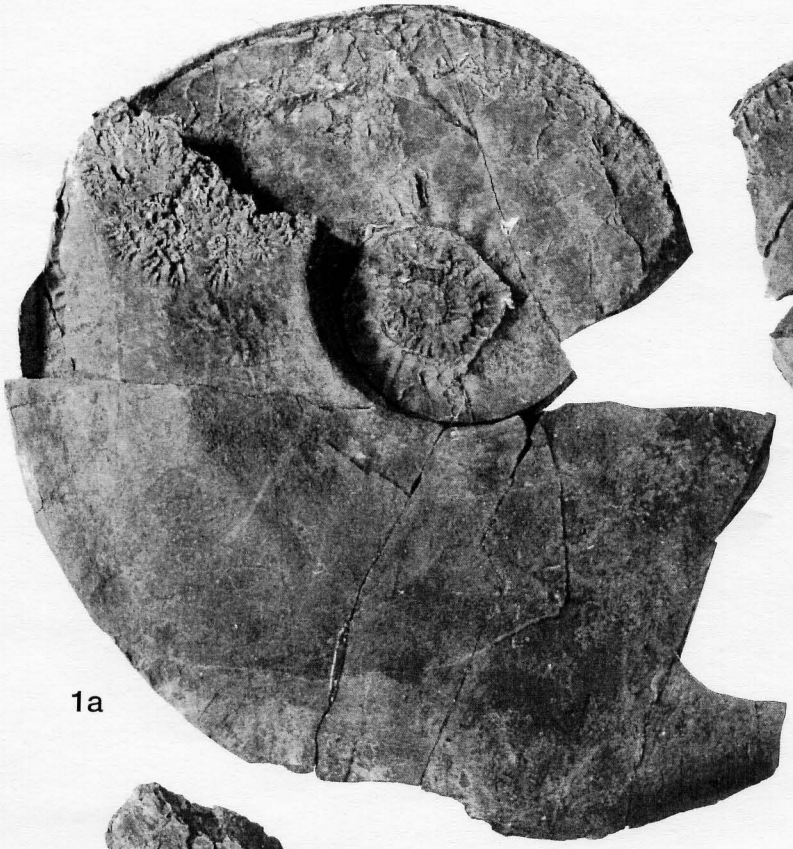
図版 7

Plate 7



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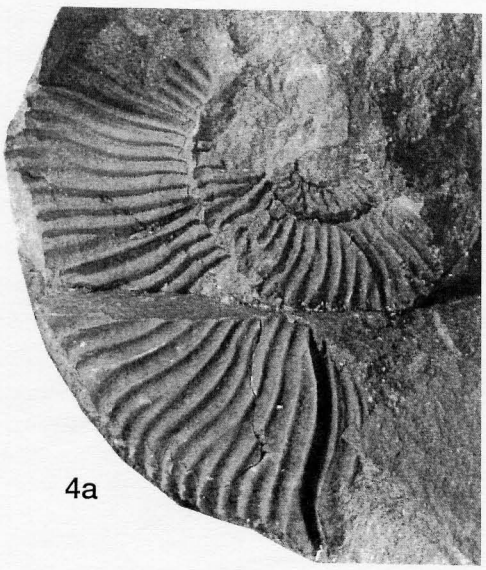

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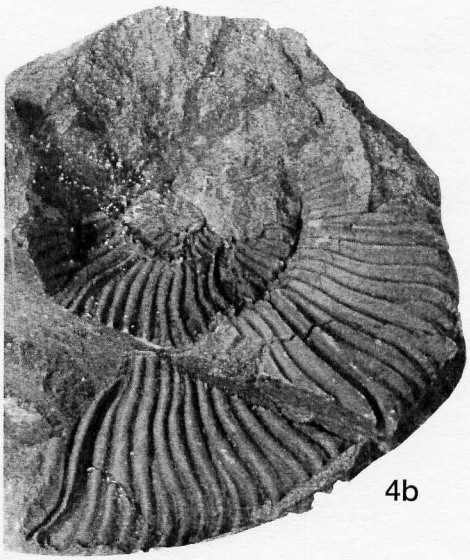

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