

DEPARTMENT OF NATIONAL RESOURCES
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

BULLETIN 158

VOLUME 2 (Plates)

CONODONT BIOSTRATIGRAPHY OF THE
UPPER DEVONIAN REEF COMPLEXES OF
THE CANNING BASIN,
WESTERN AUSTRALIA

By

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ADDENDUM

The author omitted to acknowledge the source of material used in three of the text-figures. The following words should have been included in the captions to those figures:

Figs. 27, 28

"After Playford & Lowry, 1966"

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"Geology by P.E. Playford, A.E. Cockbain
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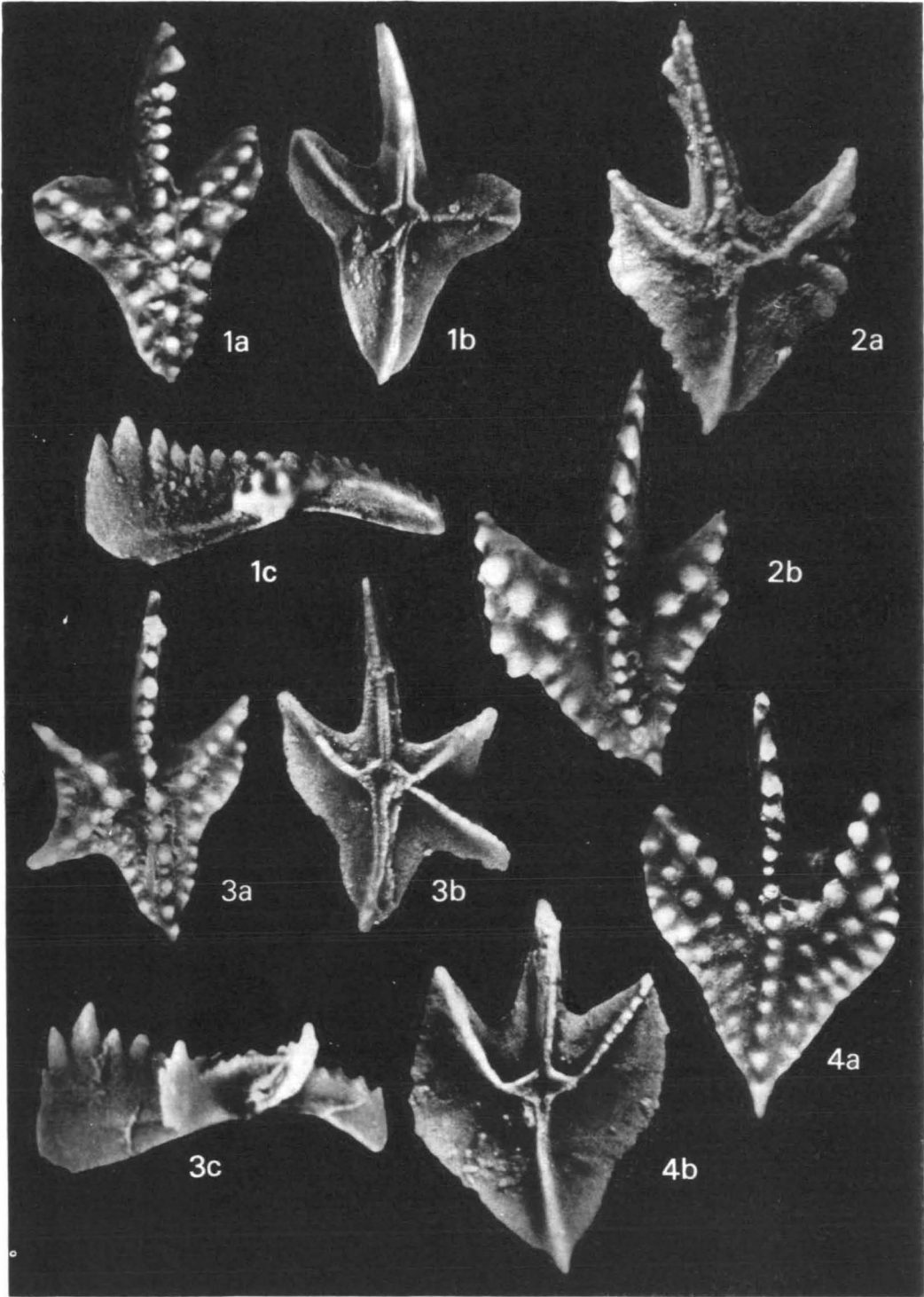


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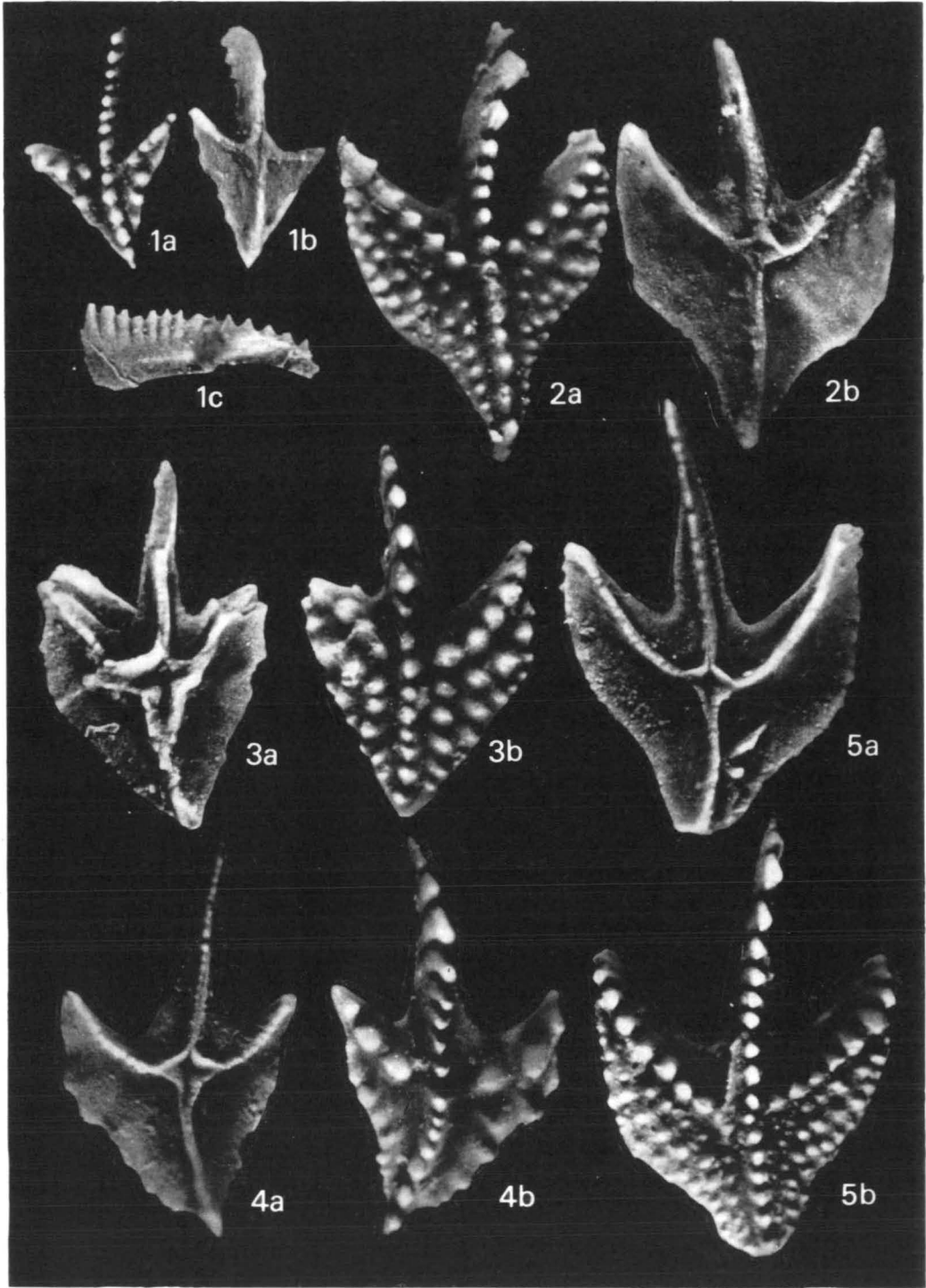


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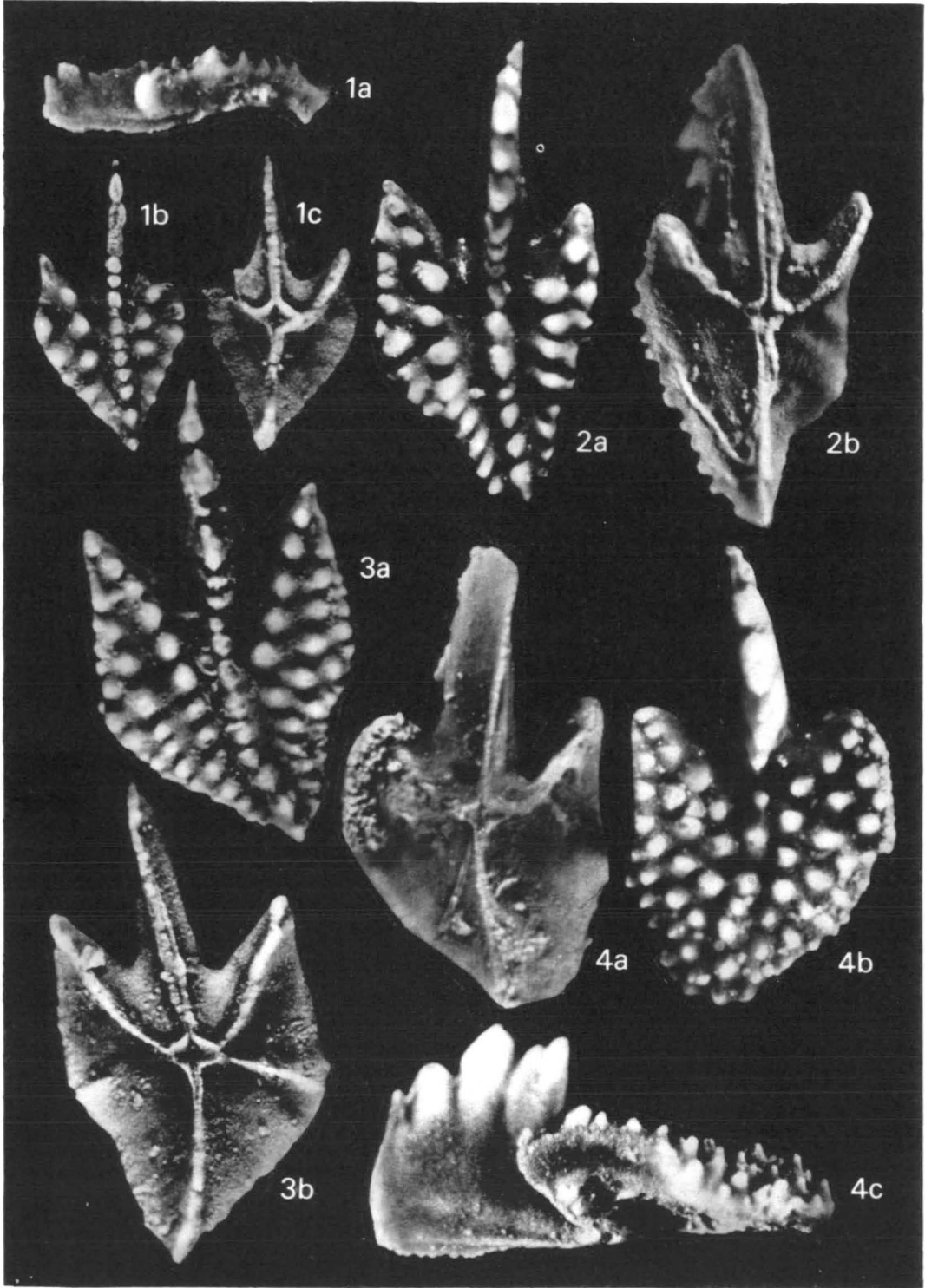


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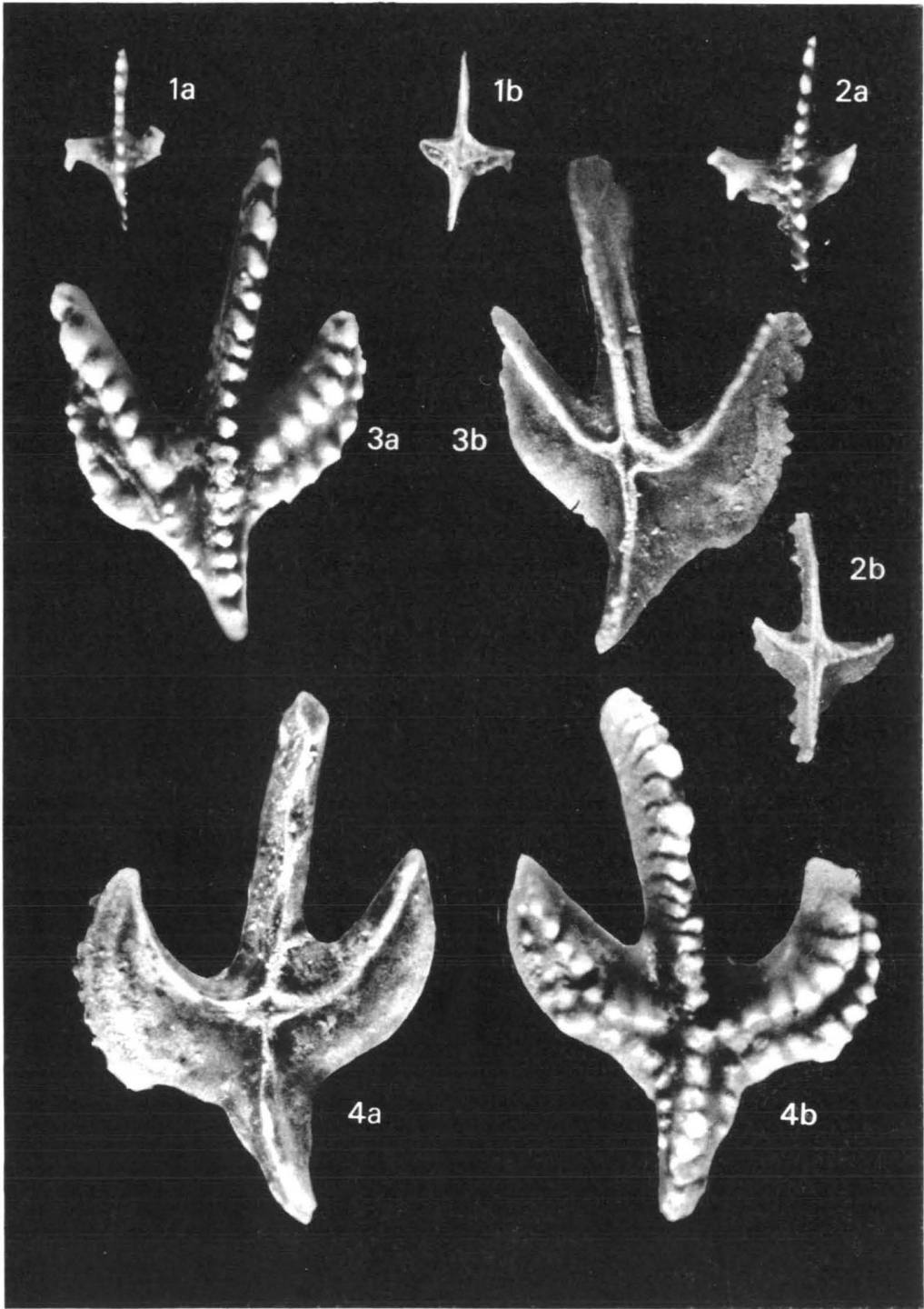


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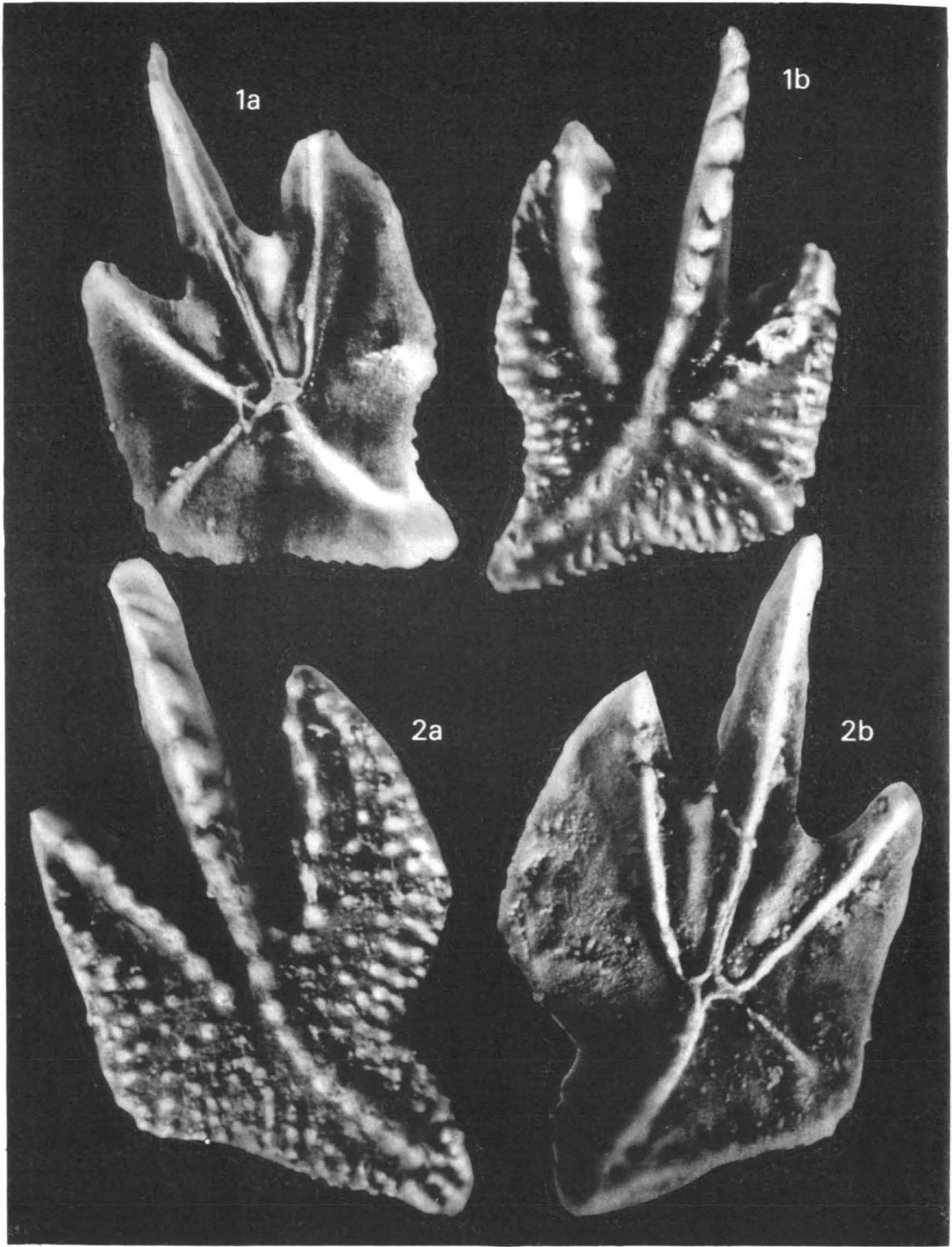


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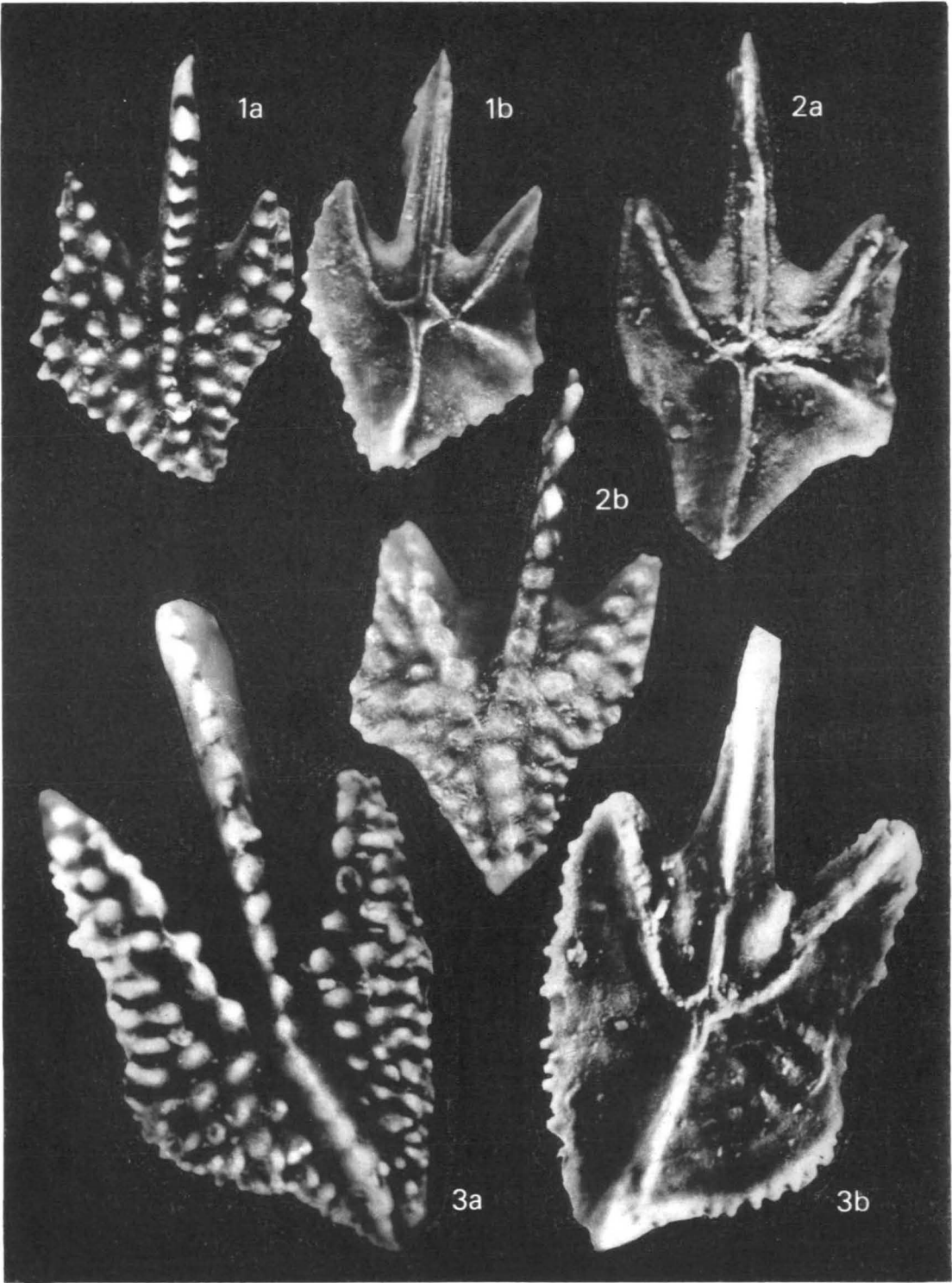


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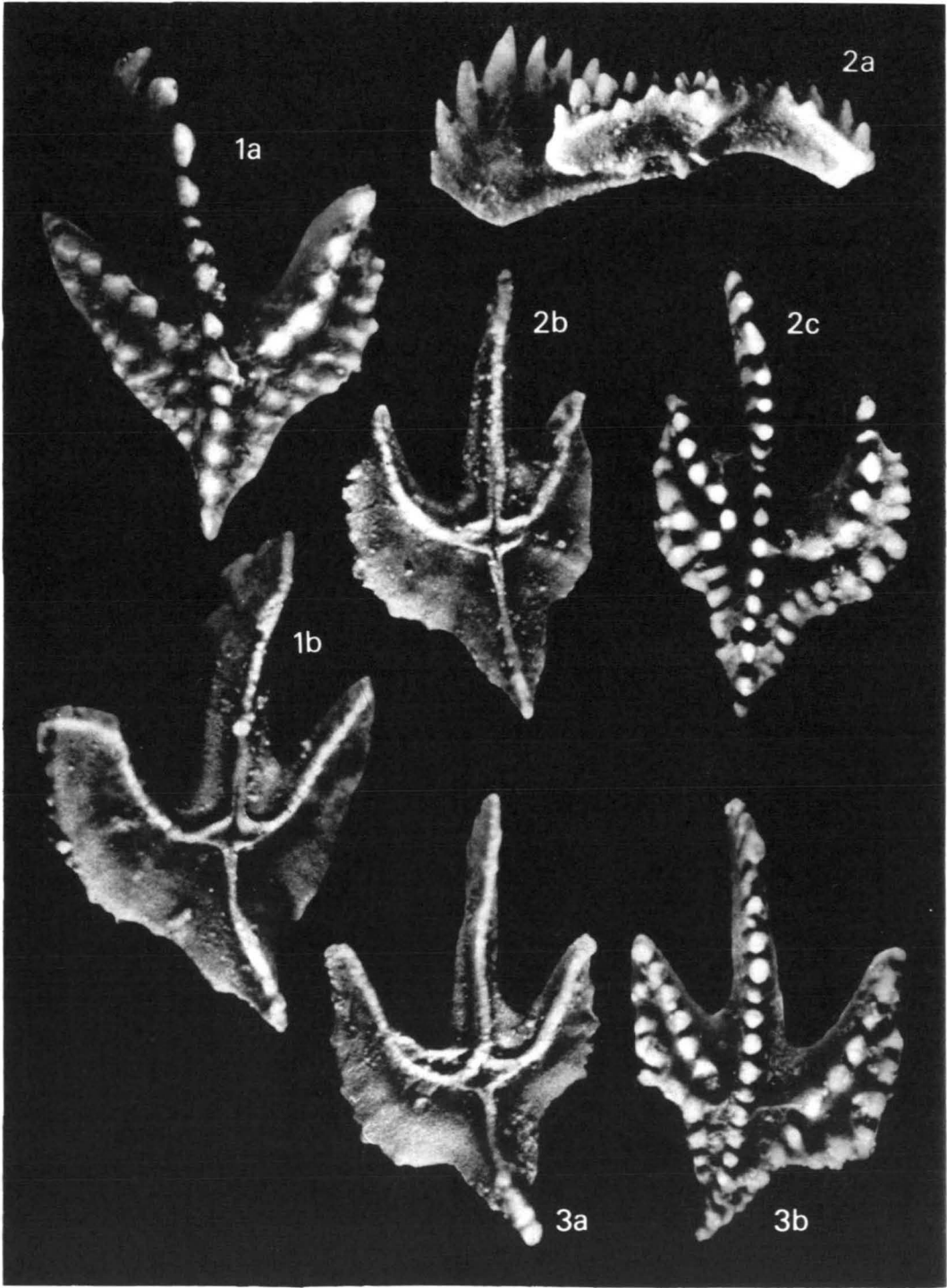


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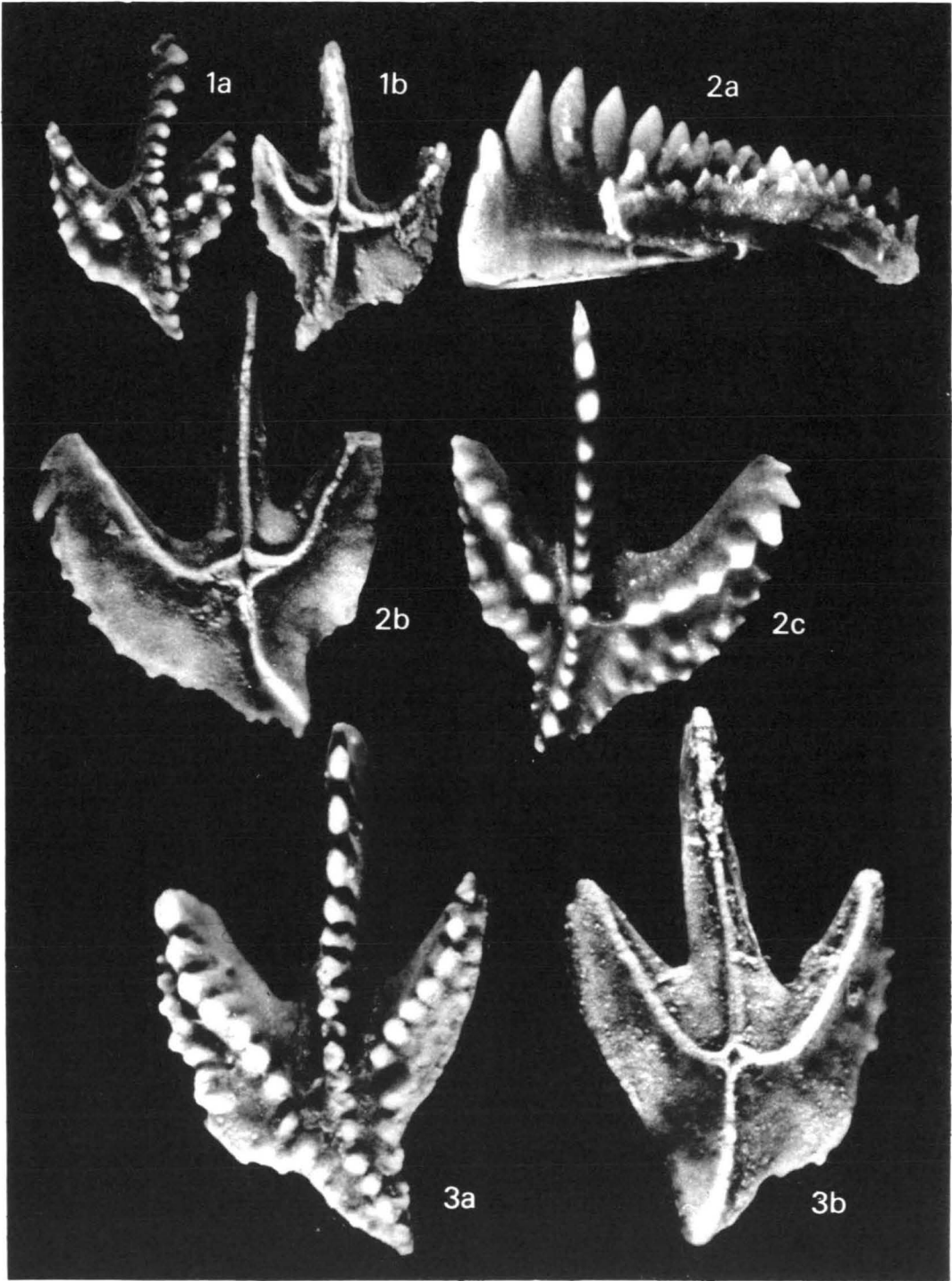


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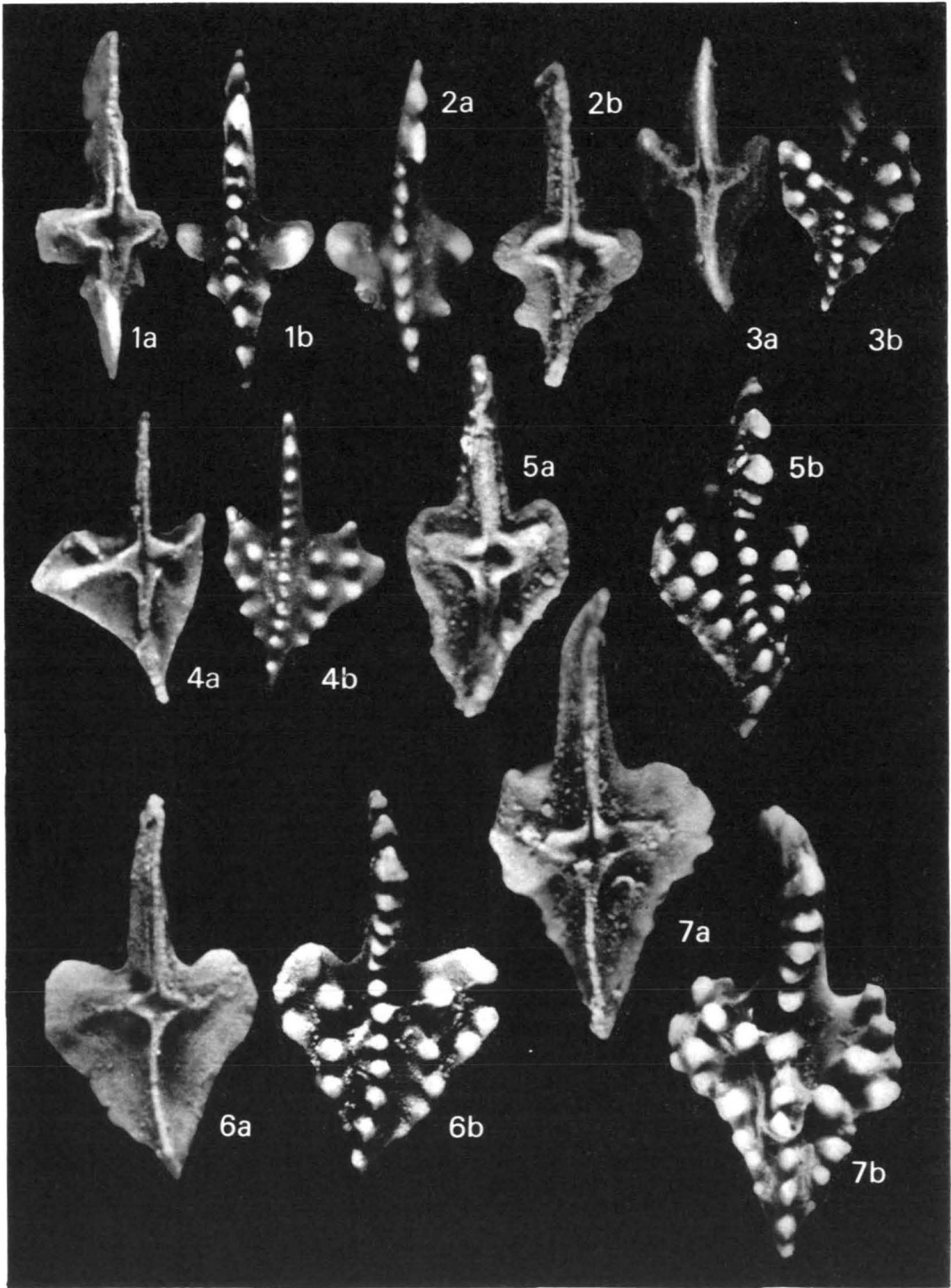


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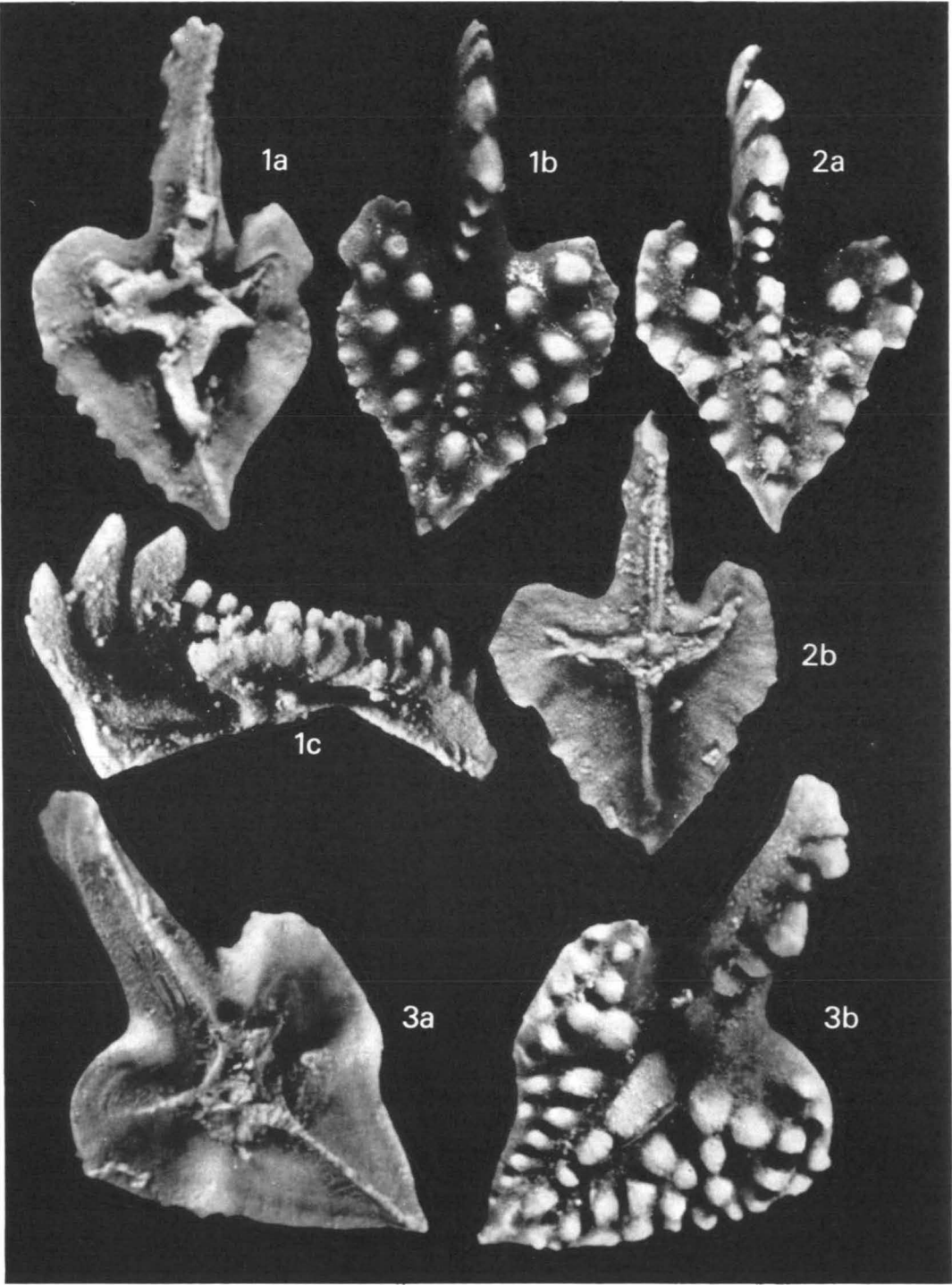


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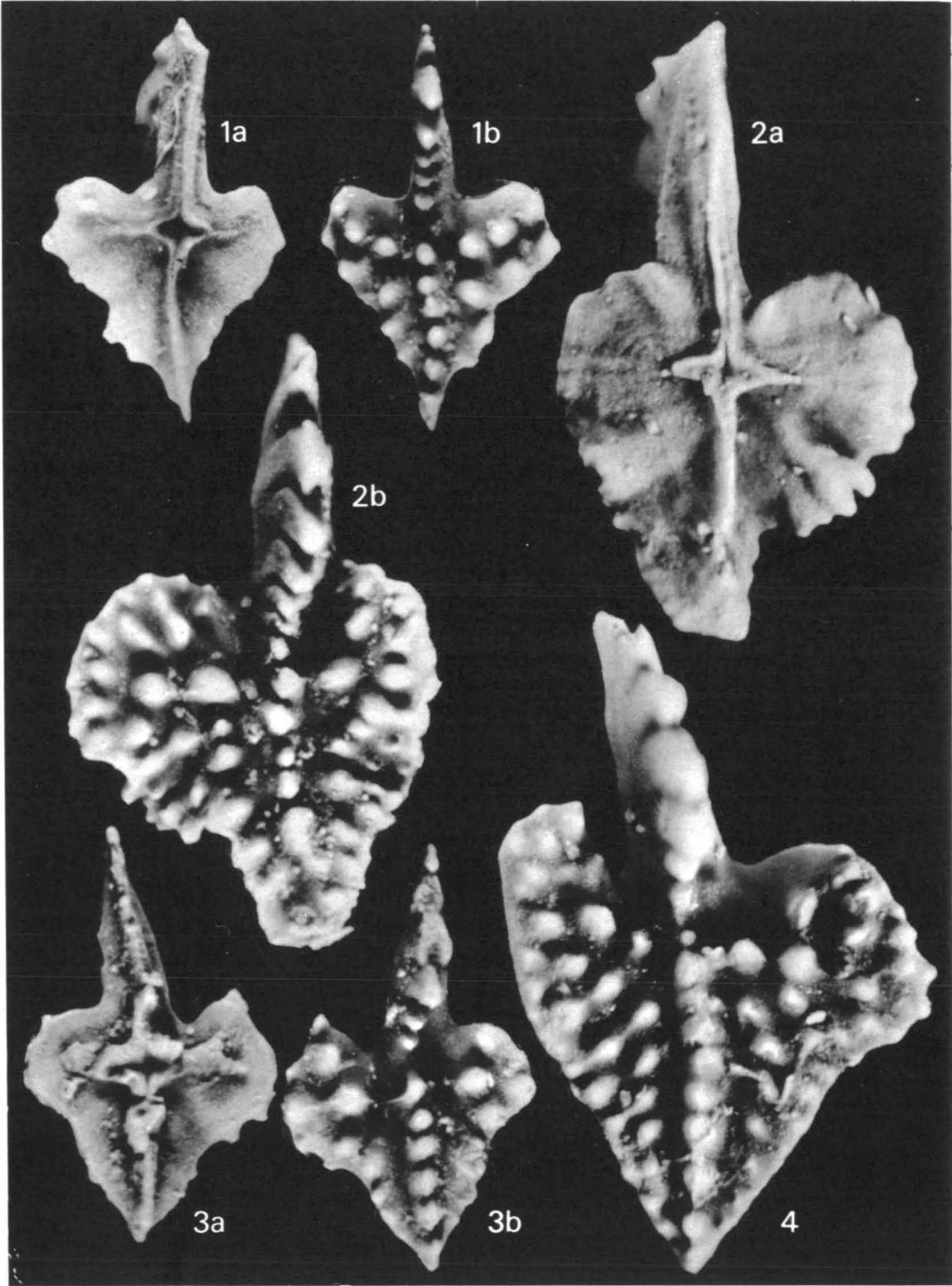


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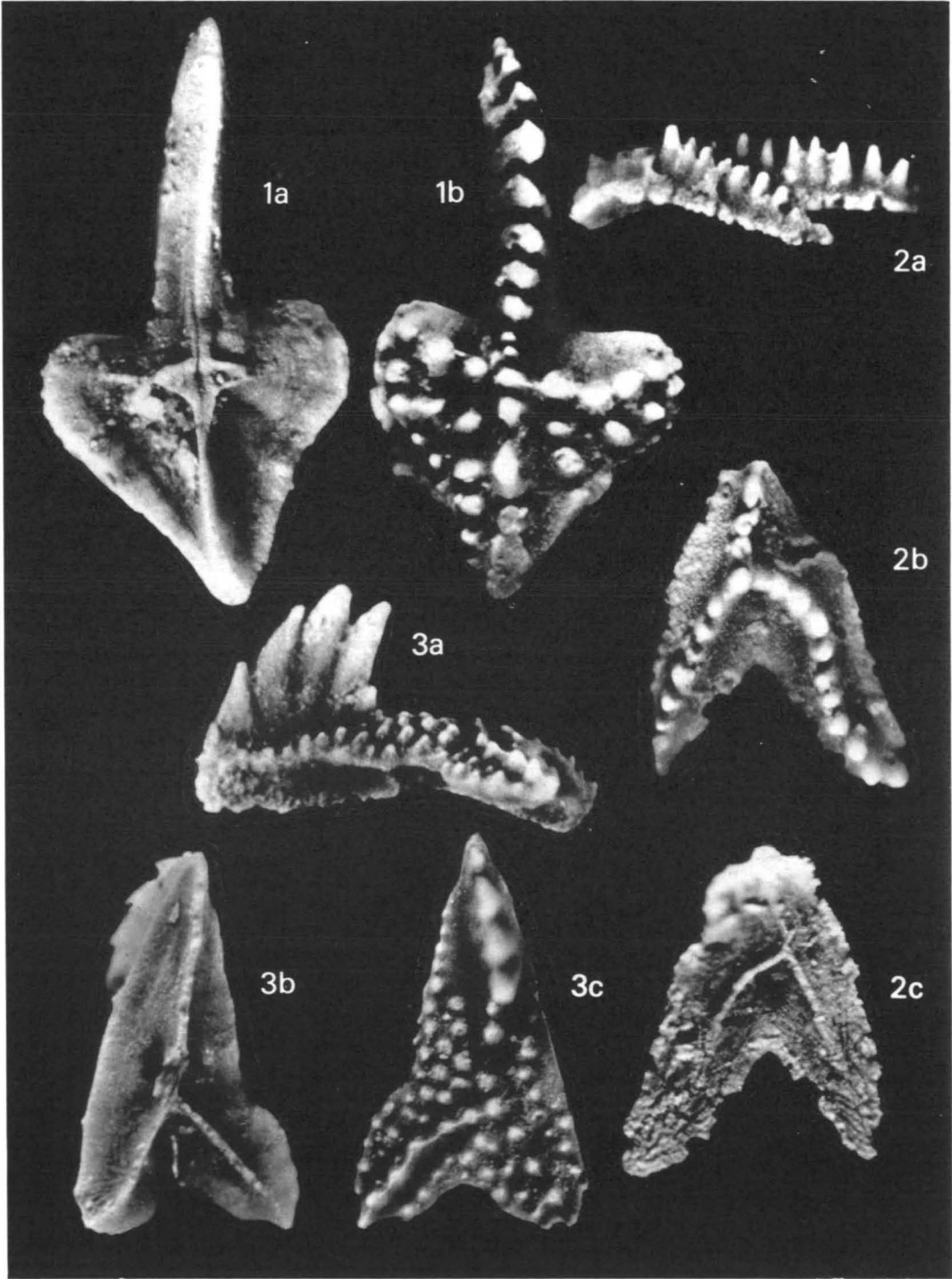


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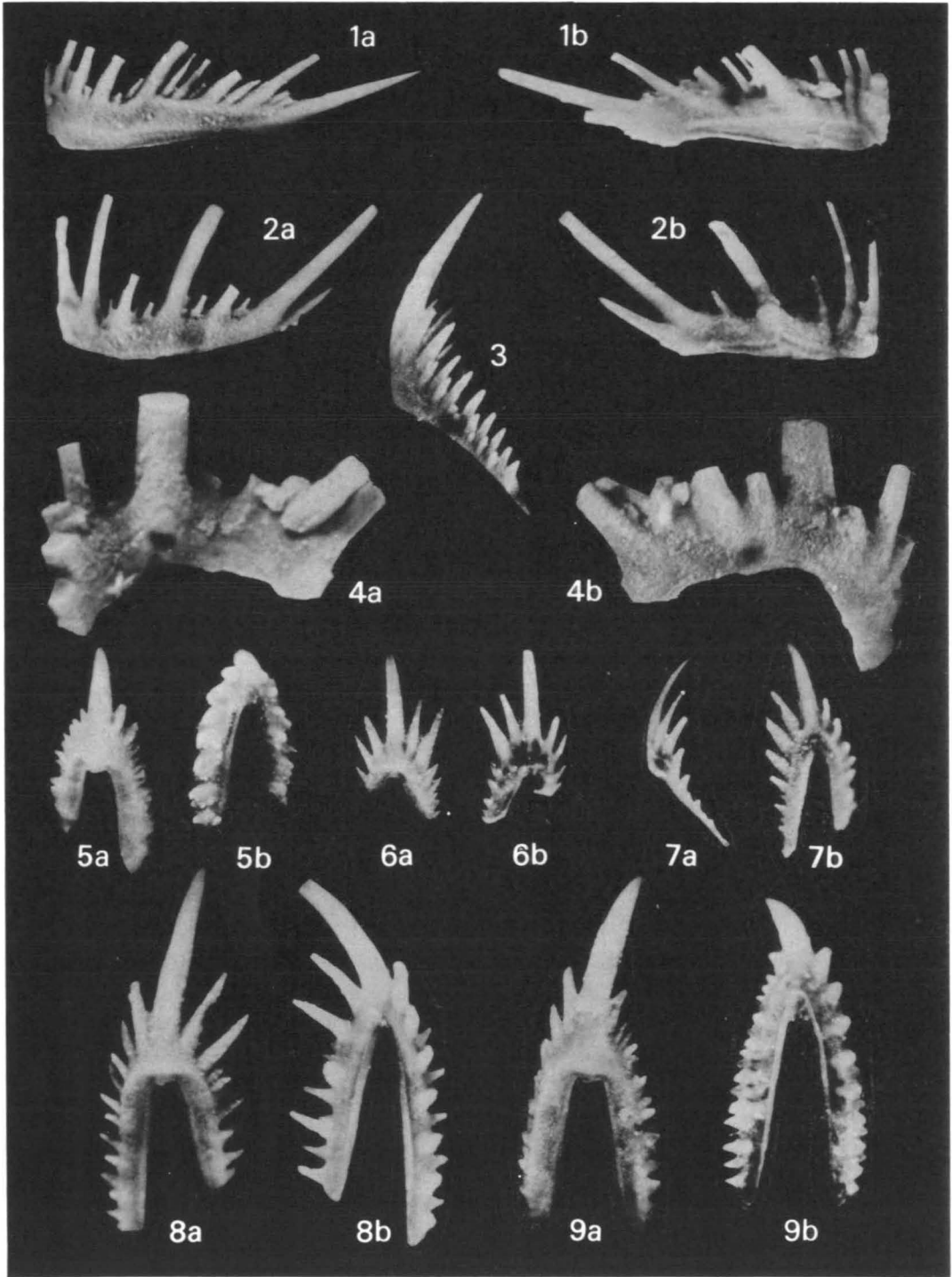


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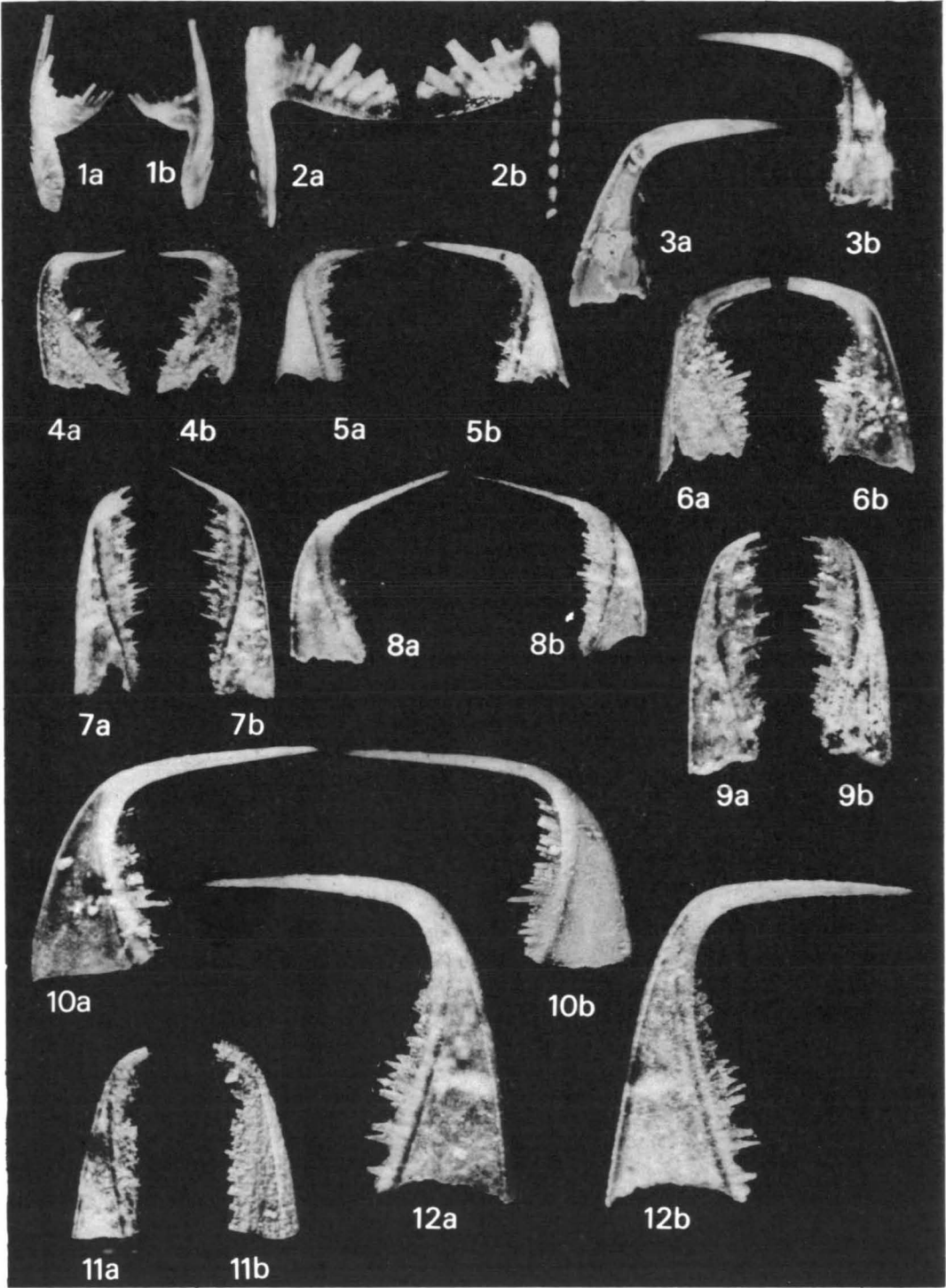


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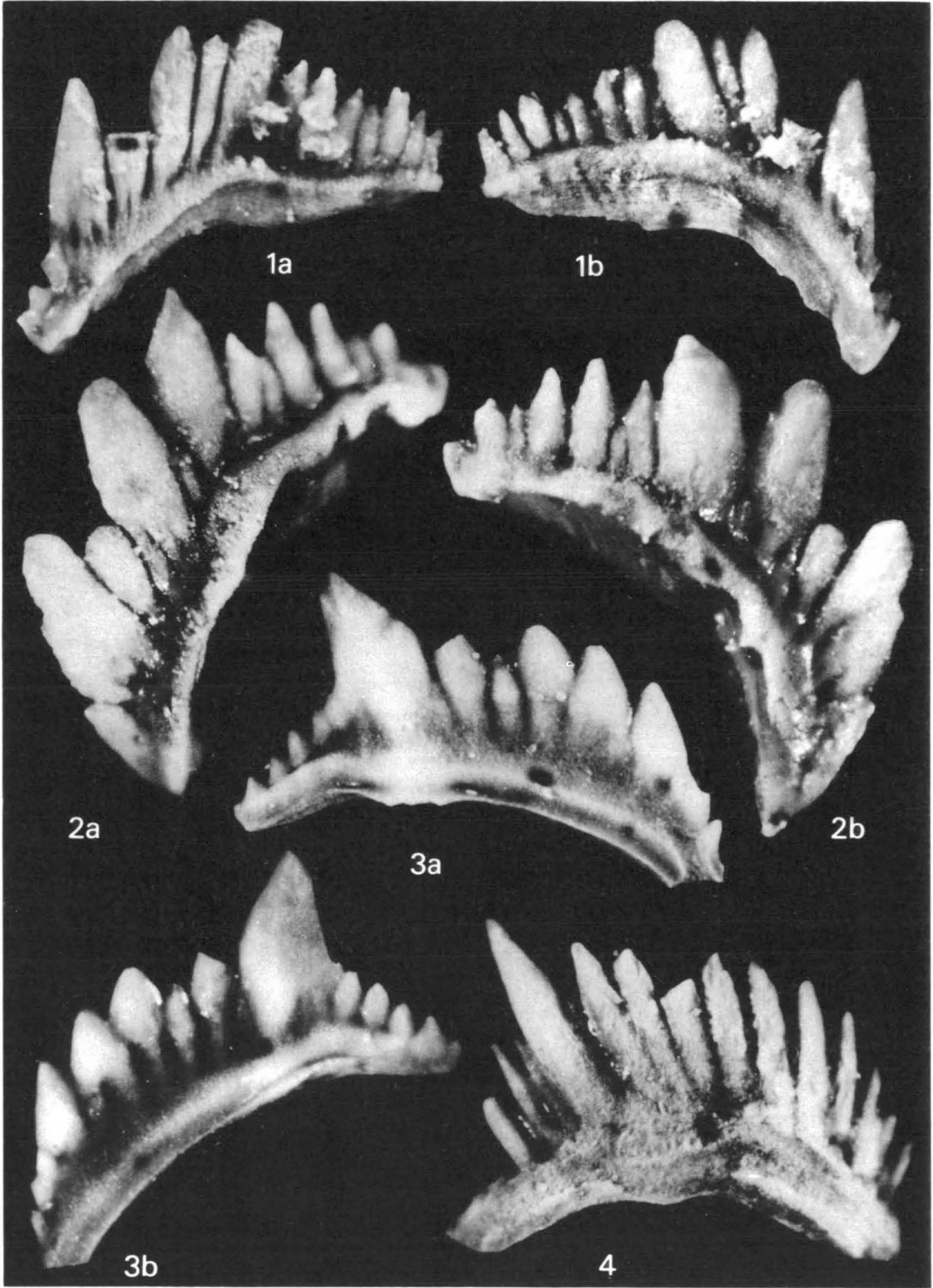


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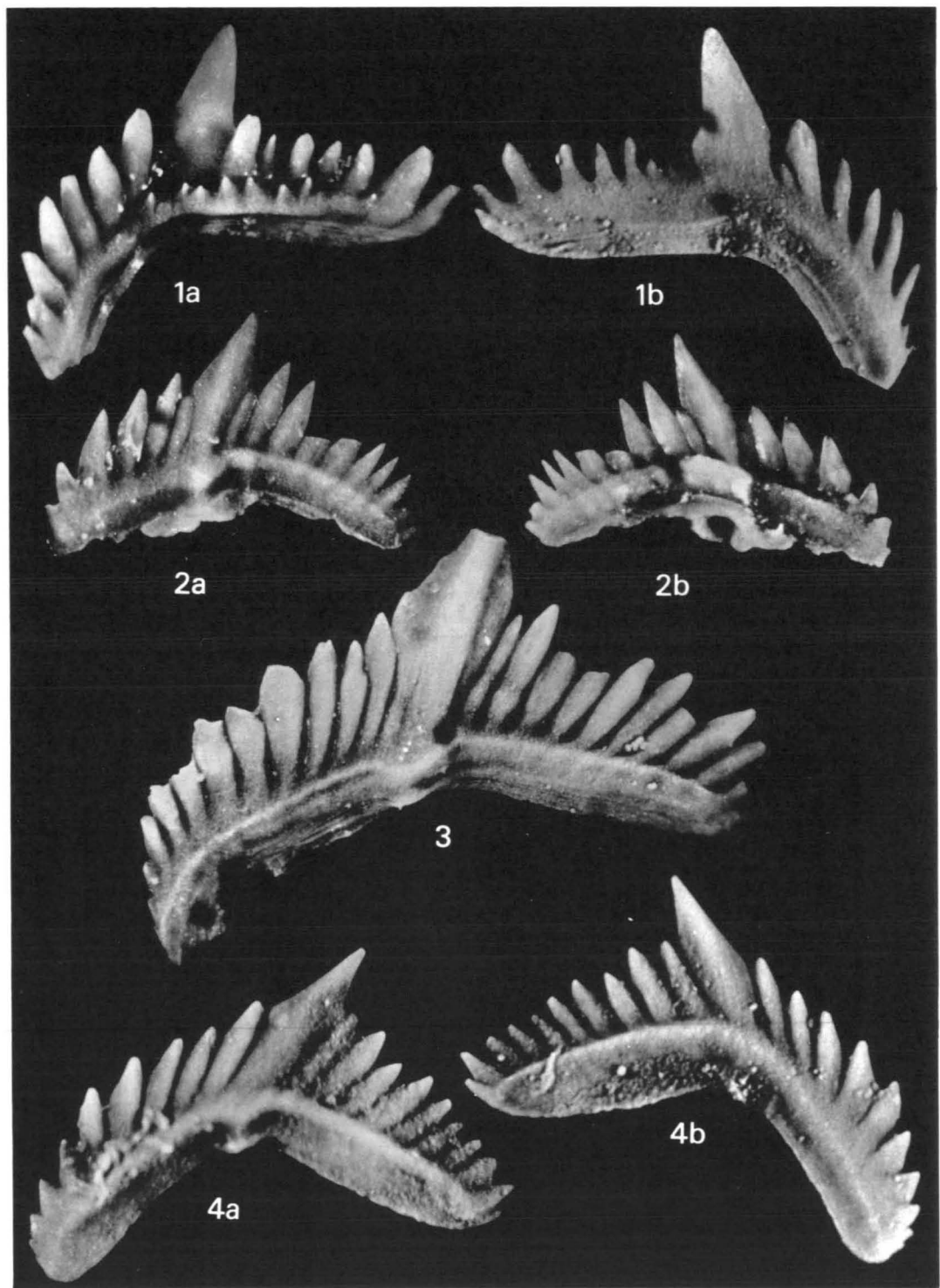


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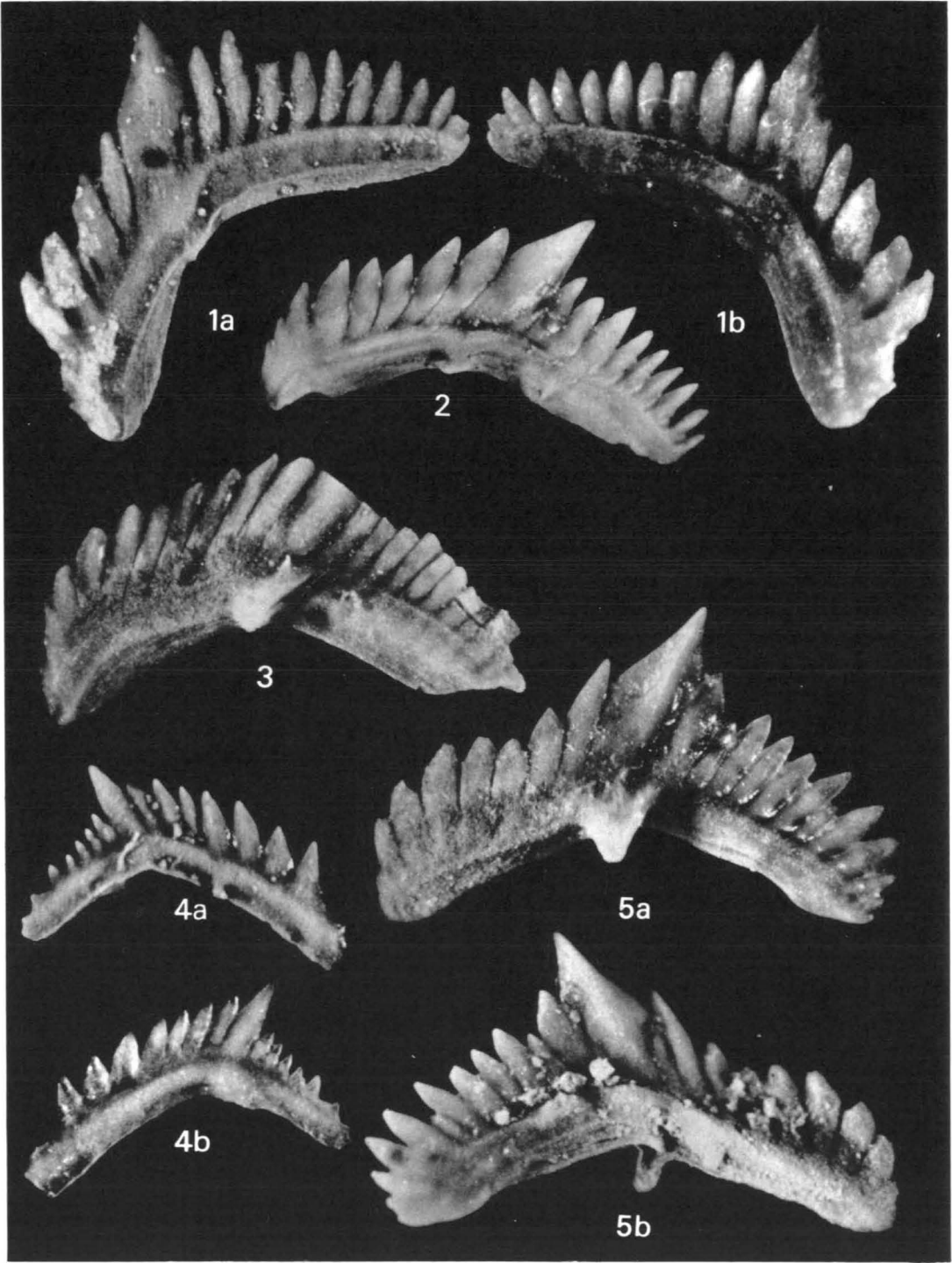


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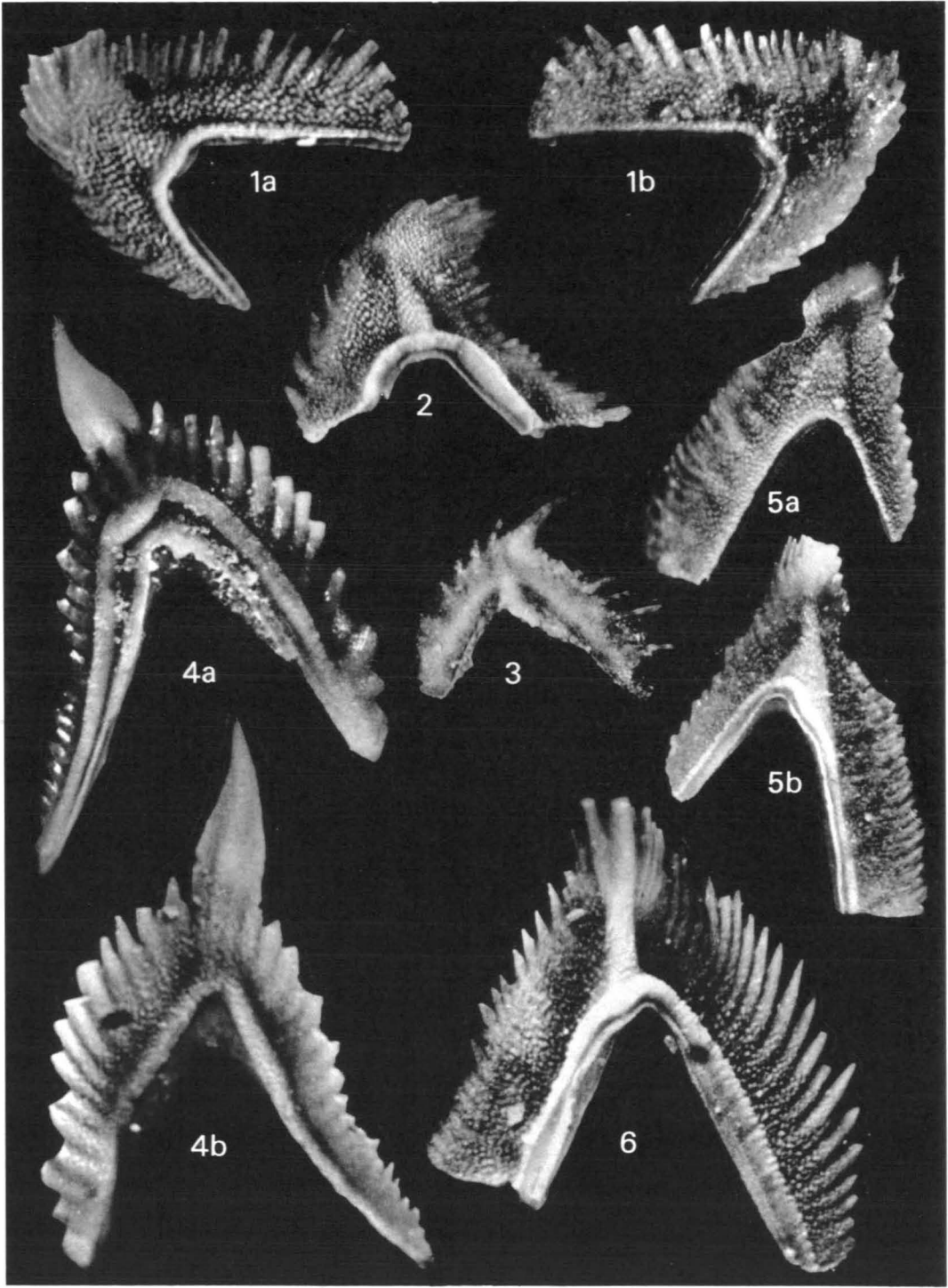


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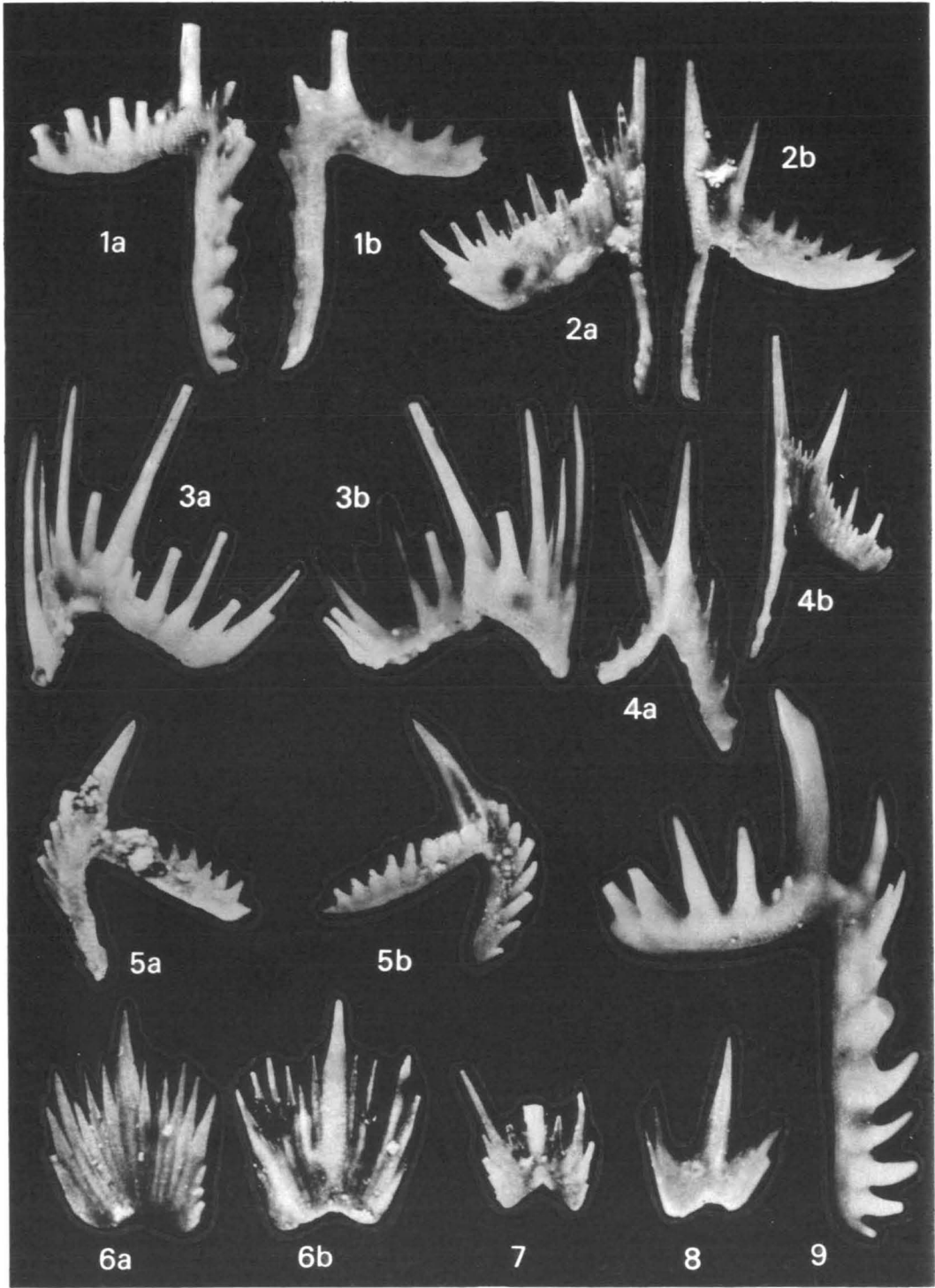


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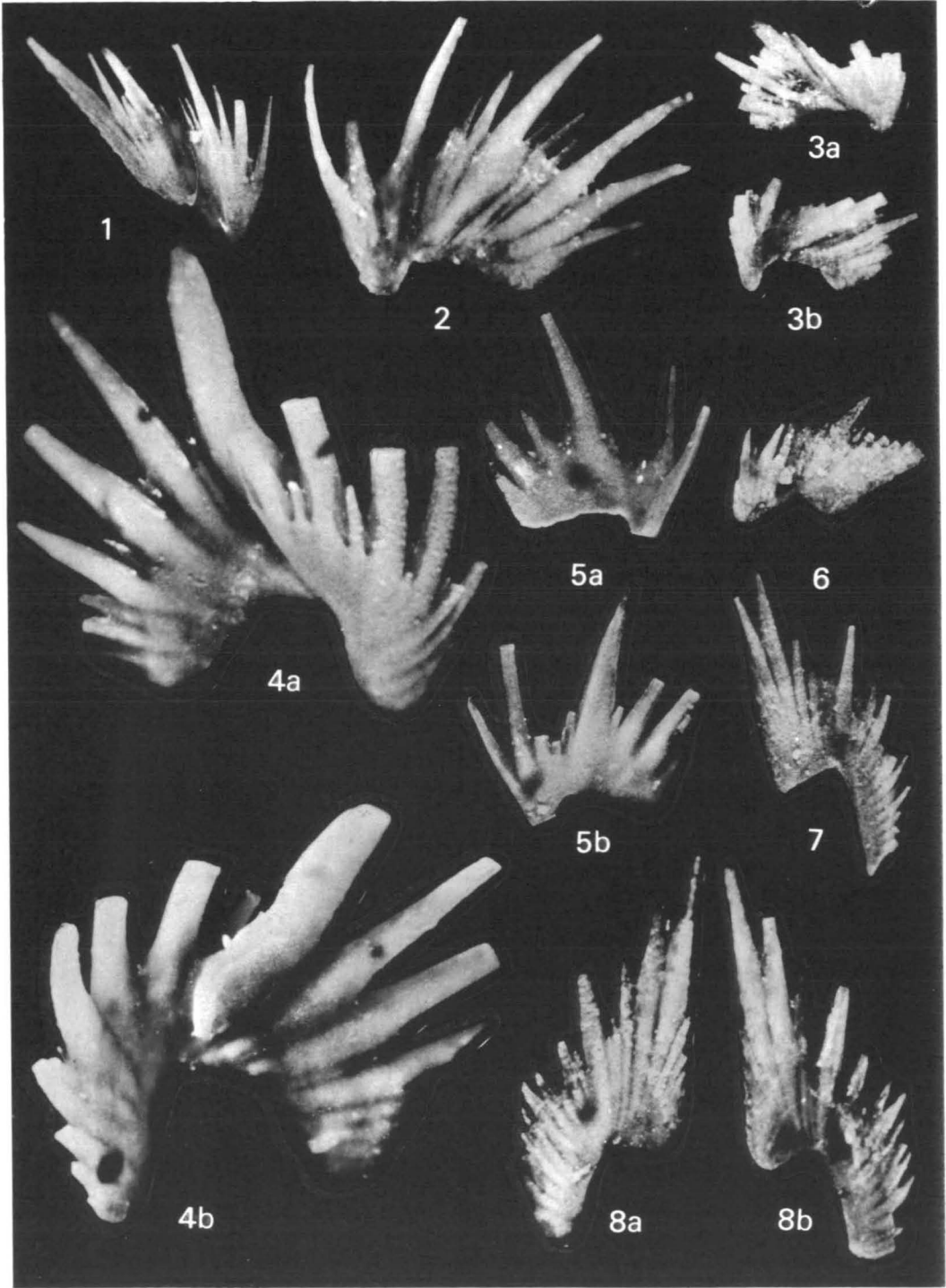


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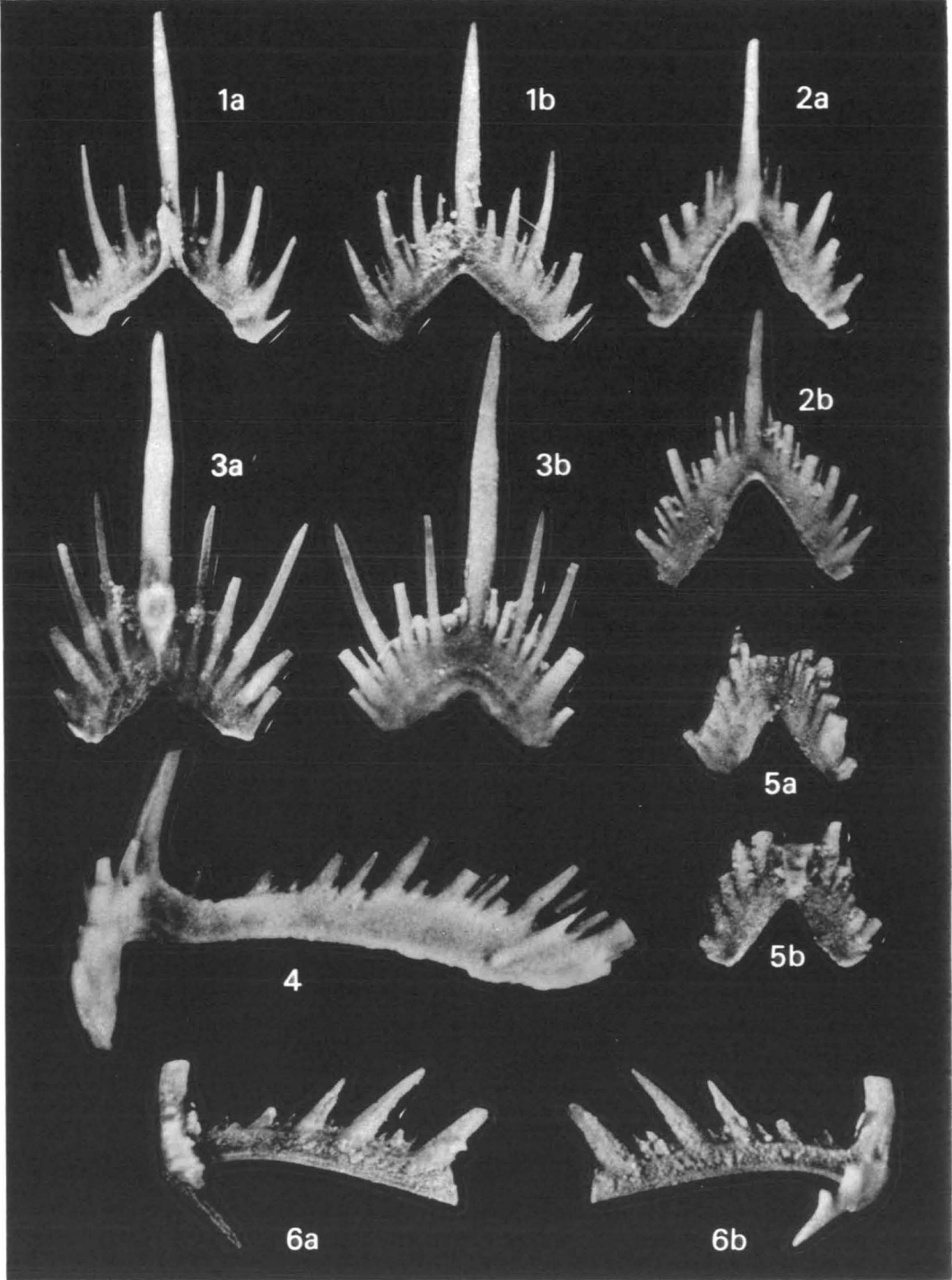


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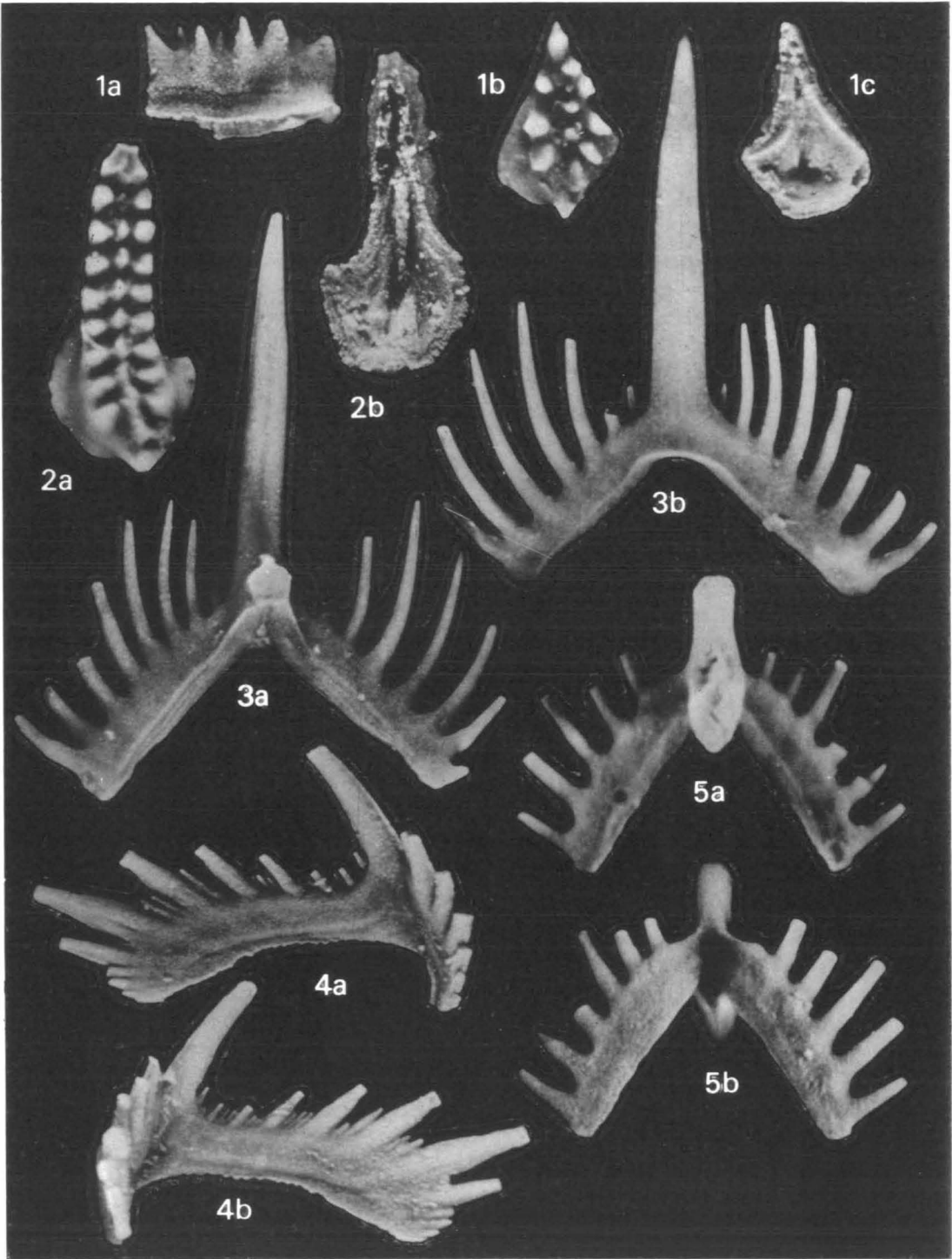


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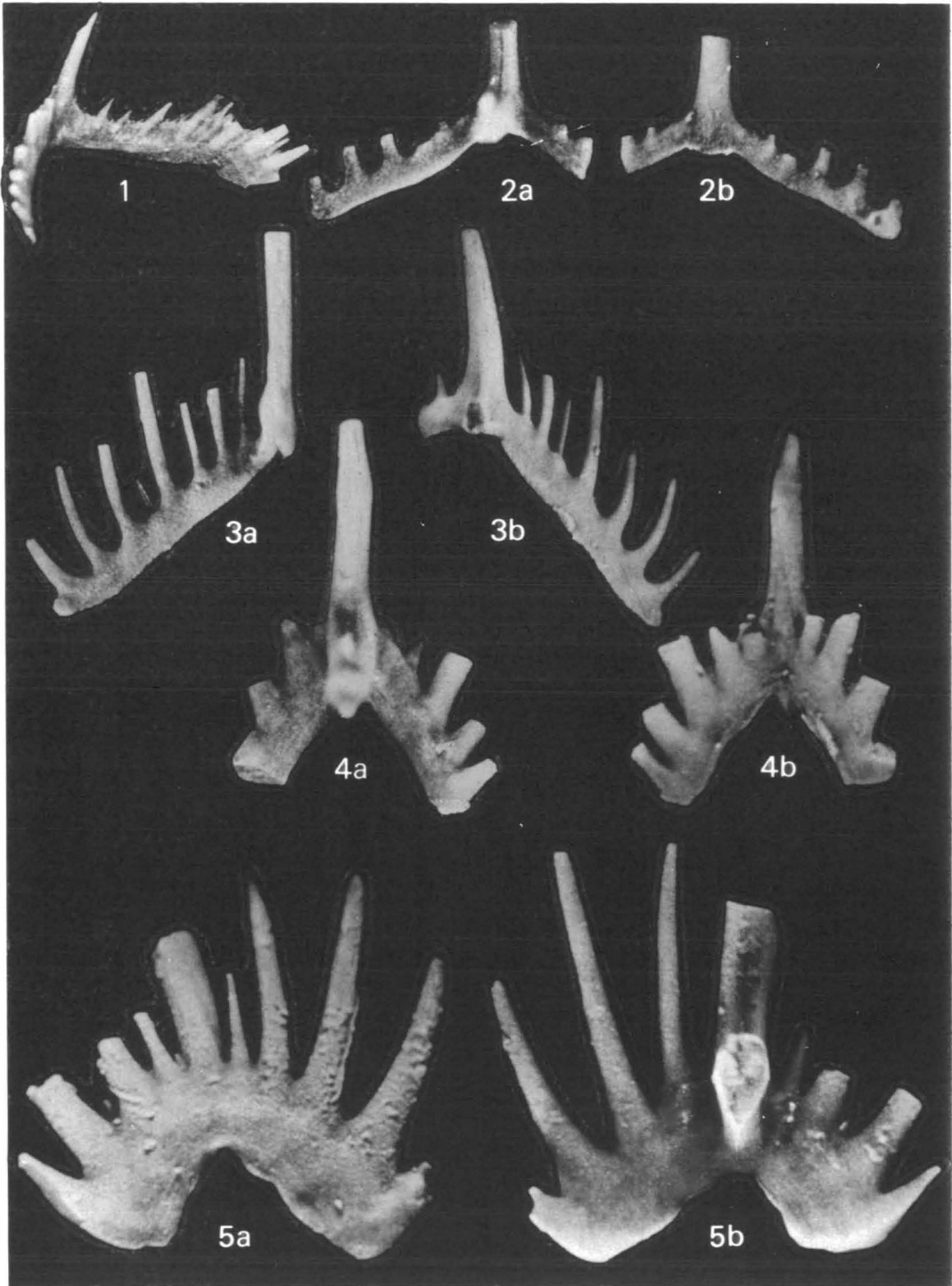


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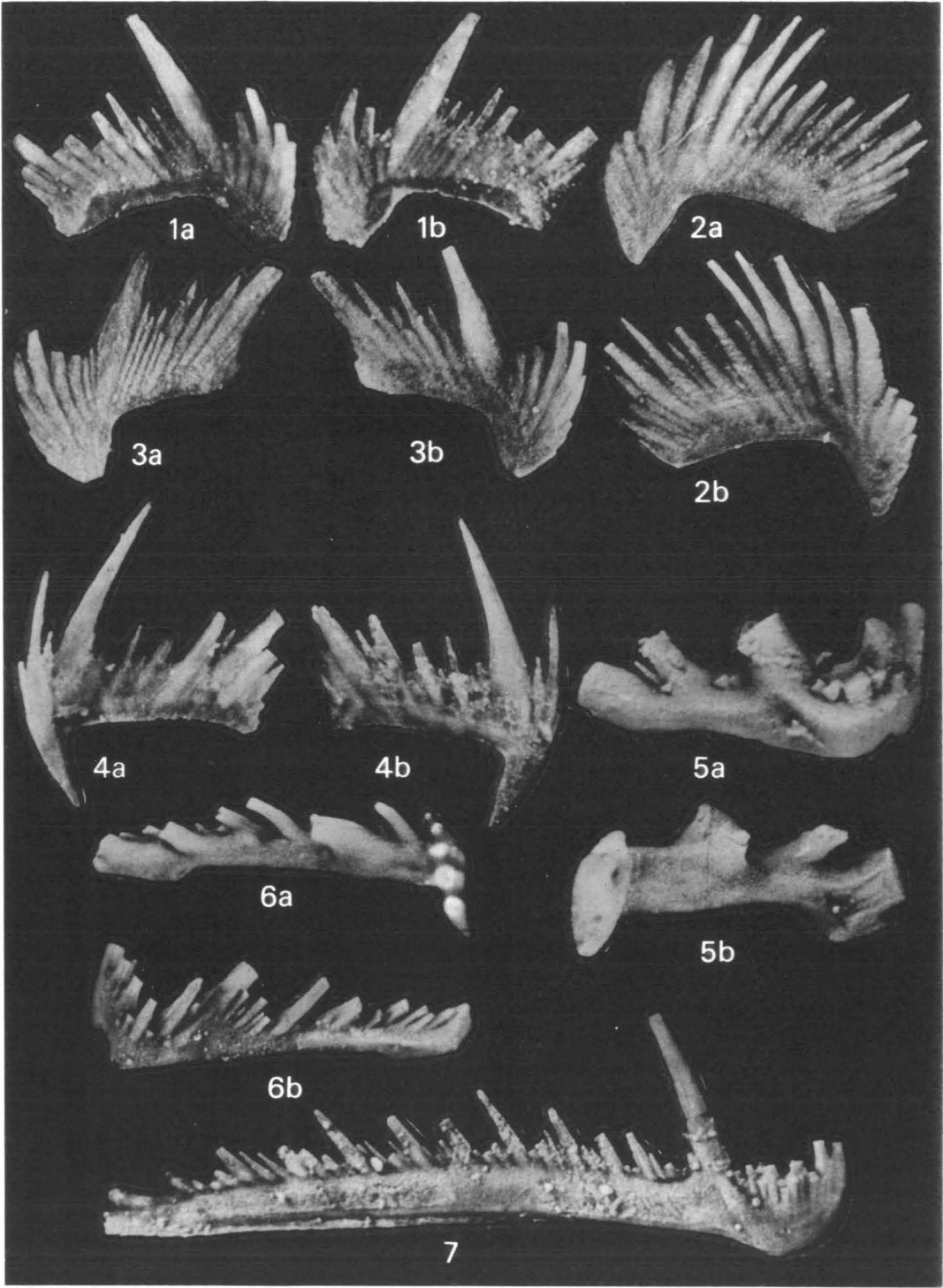


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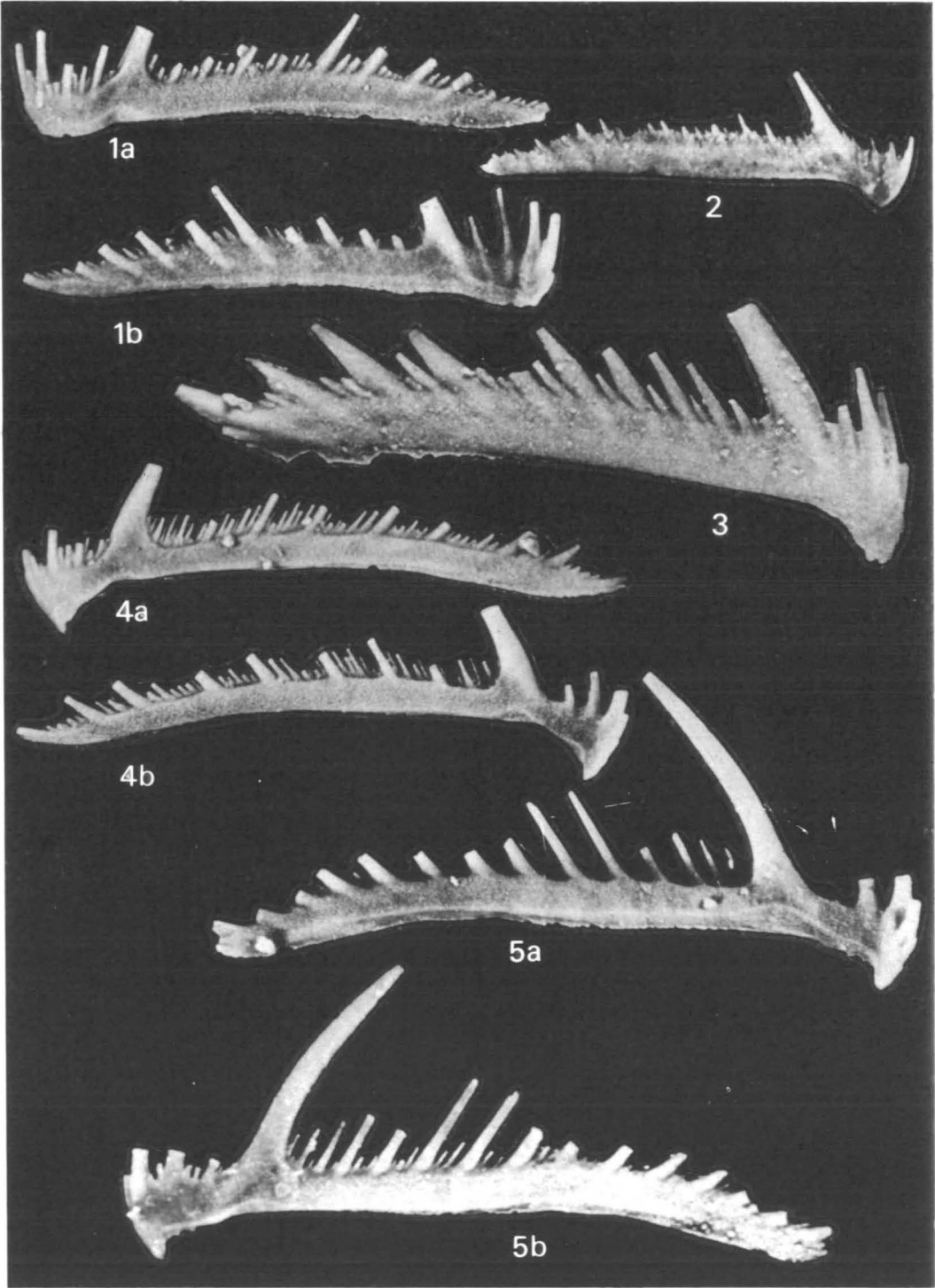


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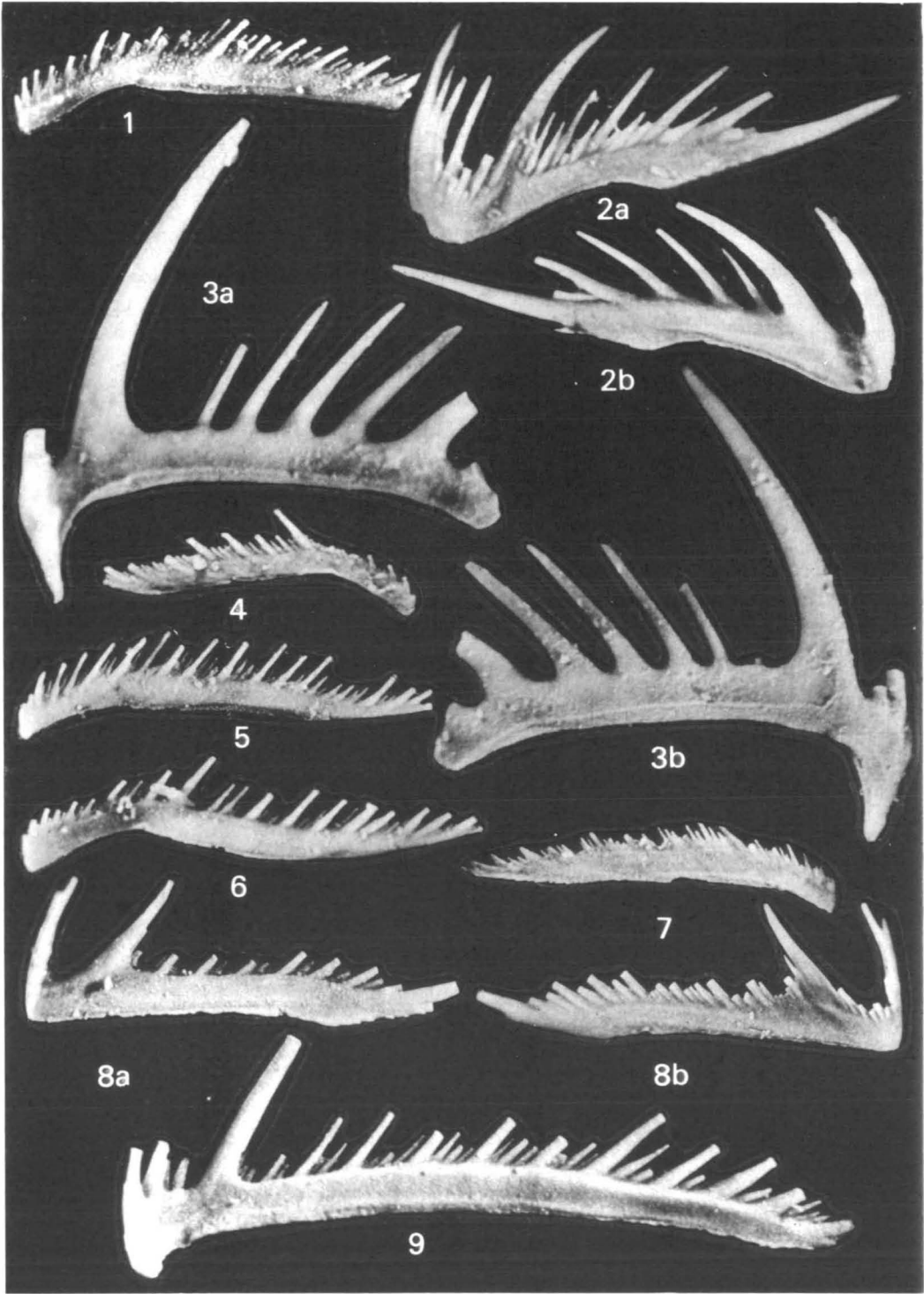


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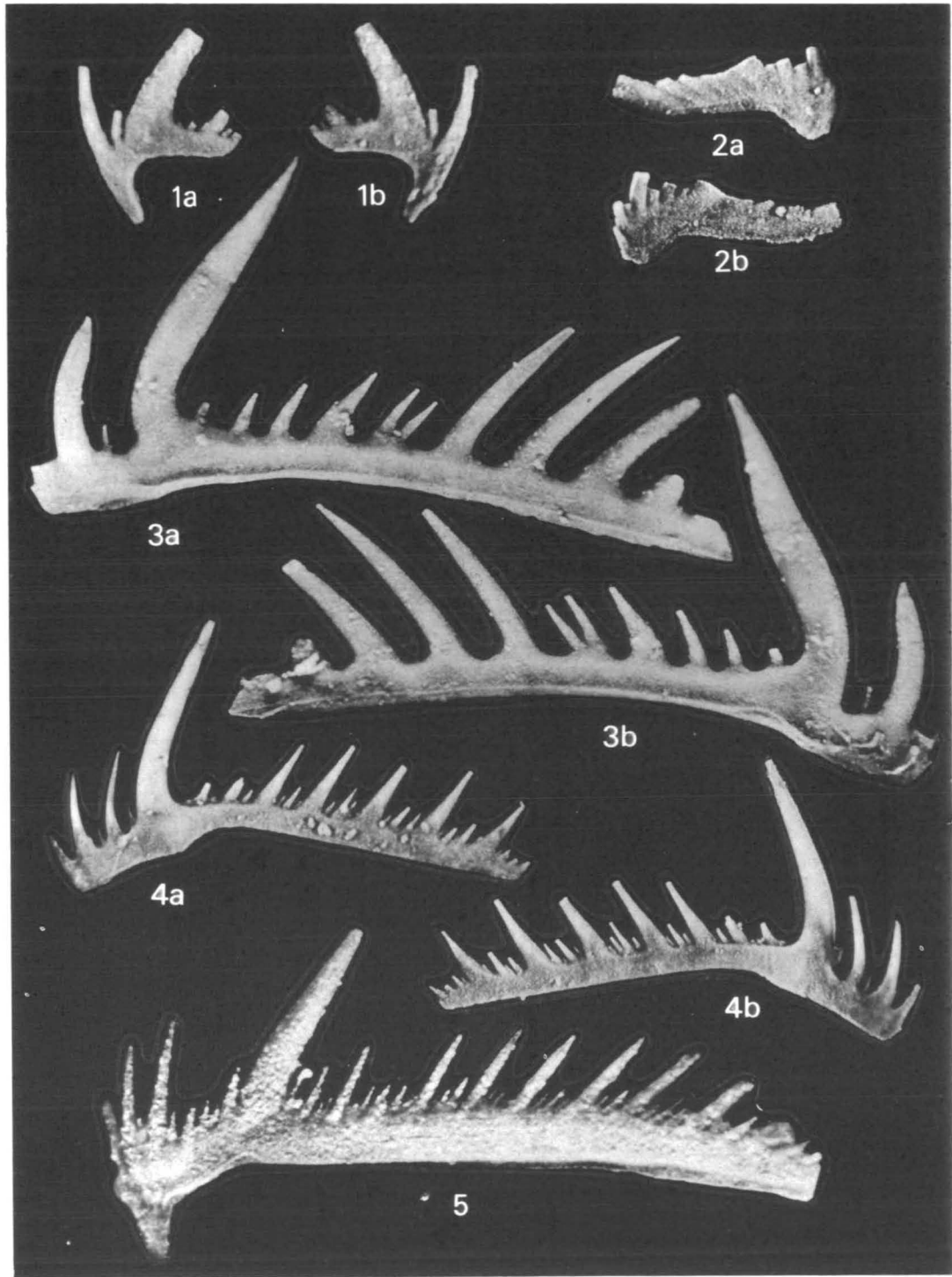


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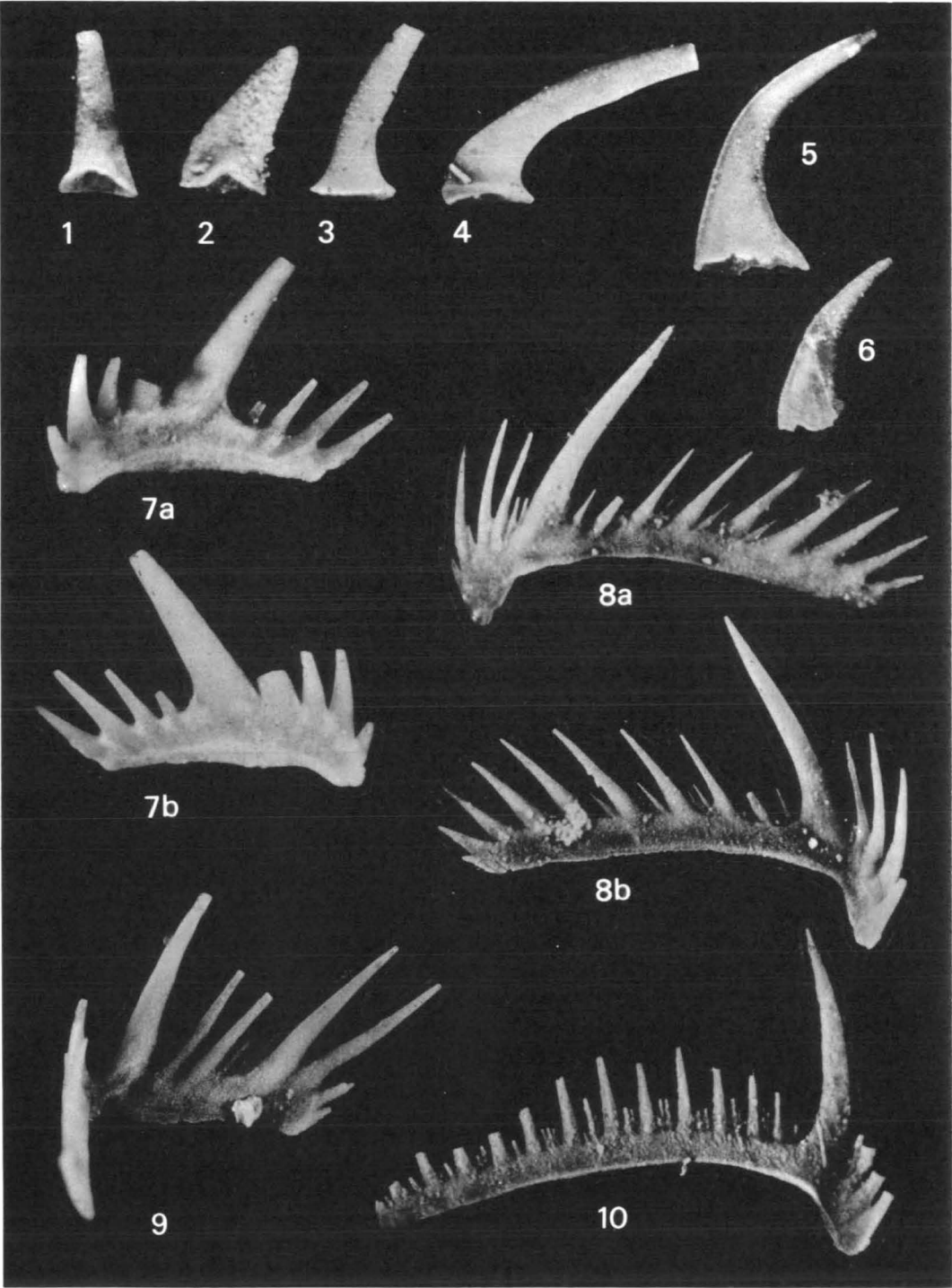


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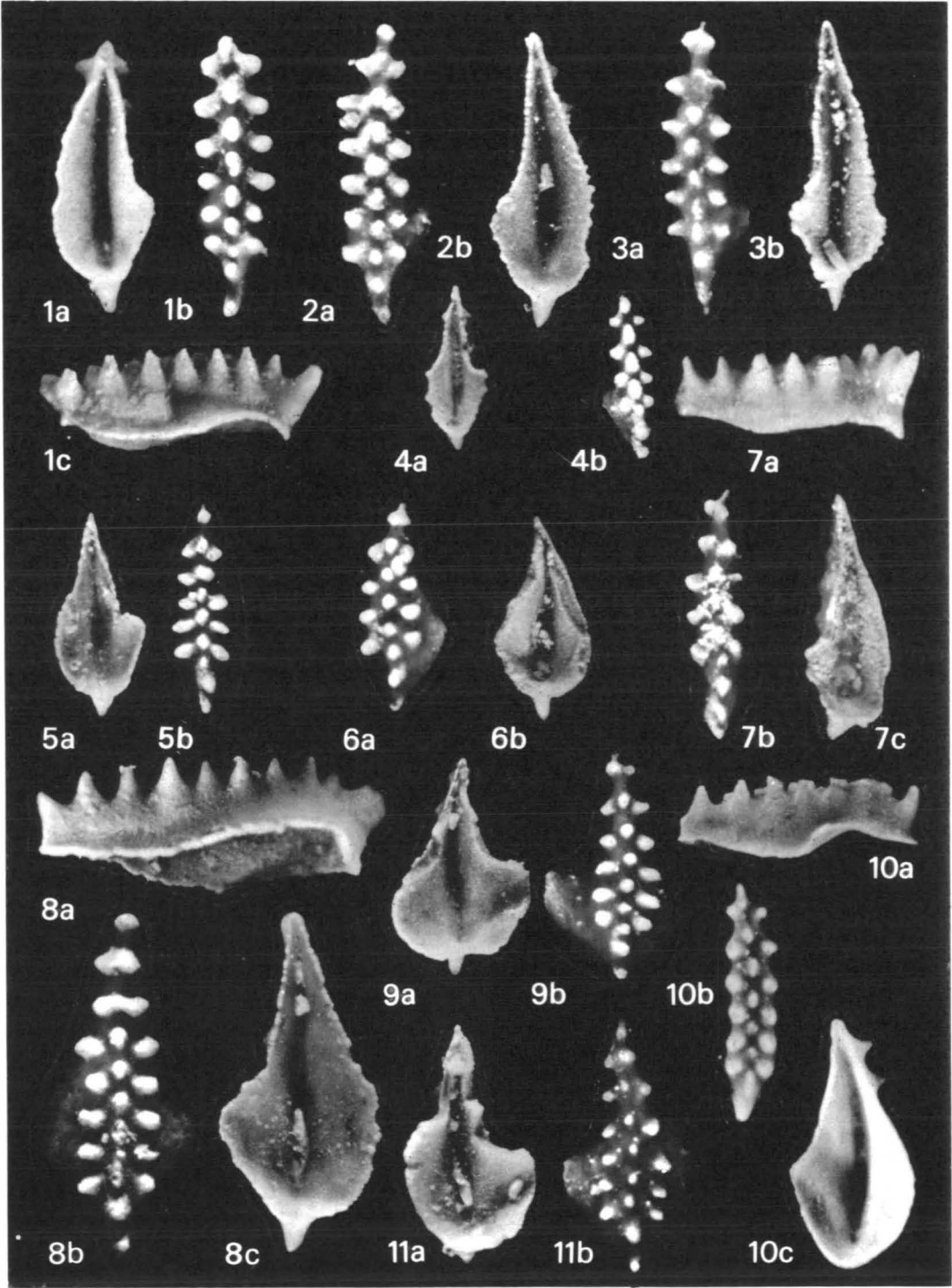


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Fig. 10a, b Aboral and oral views of specimen CPC 12466.
- Icriodus arkonensis arkonensis* Stauffer, 1938 p. 110
Fig. 11a, b, c Lateral, aboral, and oral views of specimen CPC 12467.
Fig. 12a, b Oral and aboral views of specimen CPC 12468.

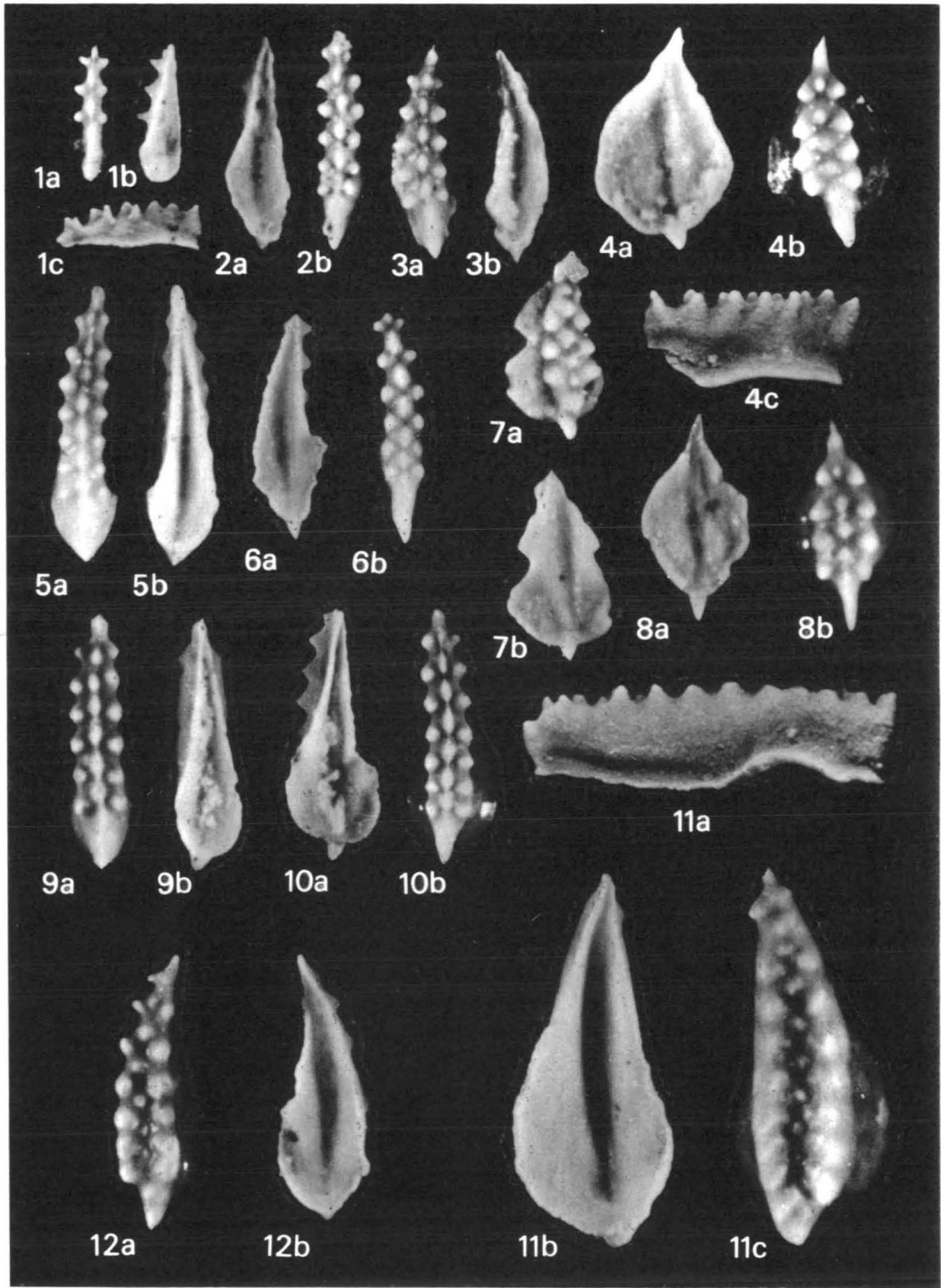


PLATE 31

Icriodus arkonensis subsp. nov. a

p. 111

- Fig. 1a, b, c Lateral, aboral, and oral views of specimen CPC 12469.
- Fig. 2a, b Oral and aboral views of specimen CPC 12470.
- Fig. 3a, b Oral and aboral views of specimen CPC 12471.
- Fig. 5a, b Aboral and oral views of specimen CPC 12472.

Icriodus arkonensis subsp. nov. b

p. 111

- Fig. 4a, b, c Lateral, oral and aboral views of specimen CPC 12473.
- Fig. 6a, b Oral and aboral views of specimen CPC 12475.
- Fig. 7a, b Aboral and oral views of specimen CPC 12474.
- Fig. 8a, b Oral and aboral views of specimen CPC 12476.

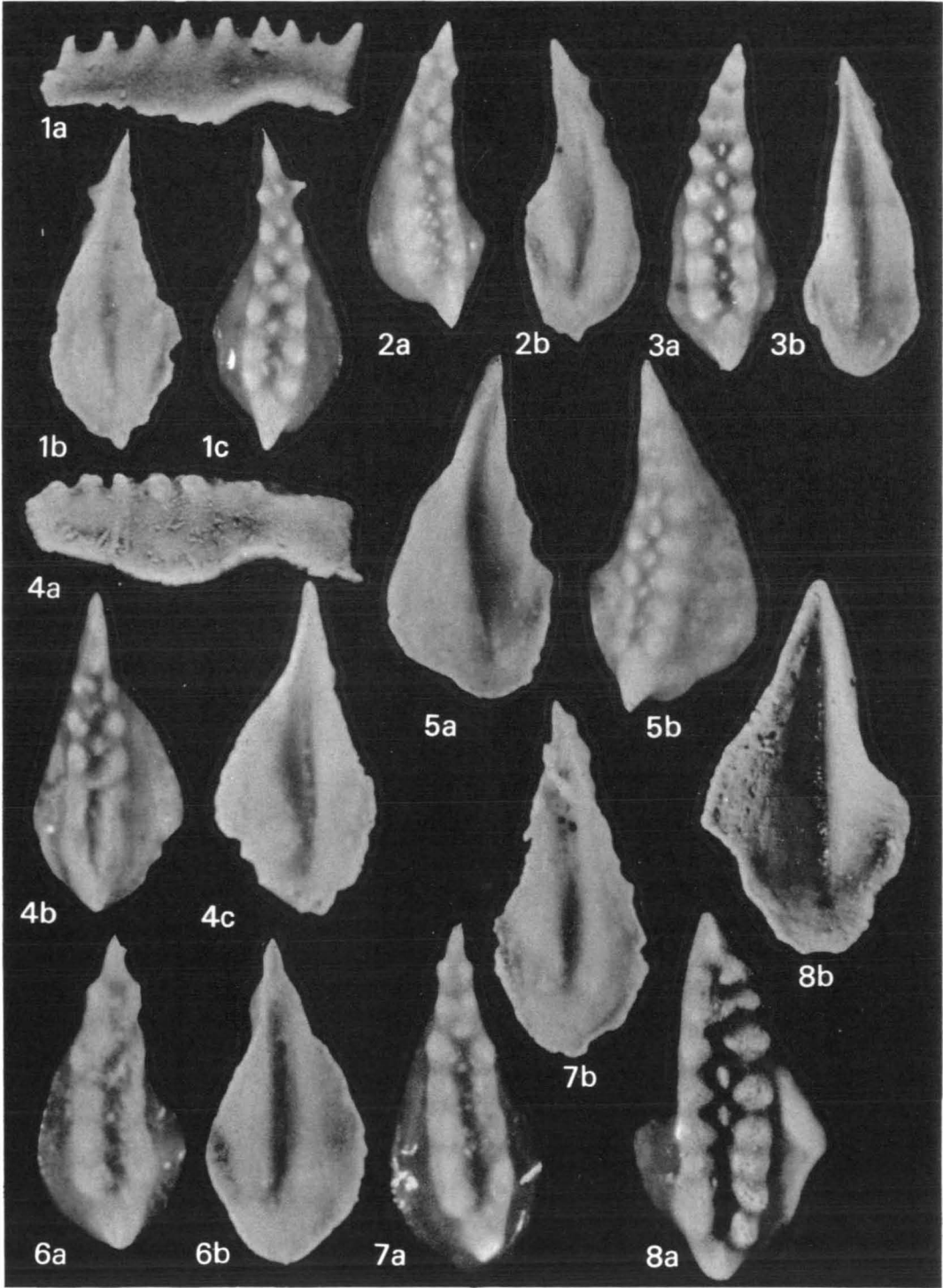


PLATE 32

Icriodus brevis brevis Stauffer, 1940

p. 112

Fig. 1a, b, c Lateral, oral, and aboral views of specimen CPC 12481.

Fig. 2a, b Oral and aboral views of specimen CPC 12482.

Icriodus brevis darbyensis Klapper, 1958

p. 112

Fig. 3a, b, c Oral, aboral, and lateral views of specimen CPC 12484.

Fig. 5a, b Aboral and oral views of specimen CPC 12486.

Fig. 6a, b, c Aboral, oral, and lateral views of specimen CPC 12483.

Fig. 7 Oral view of specimen CPC 12485.

Icriodus arkonensis subsp. nov. c

p. 111

Fig. 4a, b Oral and aboral views of specimen CPC 12480.

Fig. 8a, b Oral and aboral views of specimen CPC 12478.

Fig. 9a, b, c Lateral, oral, and aboral views of specimen CPC 12477.

Fig. 10a, b Oral and aboral views of specimen CPC 12479.

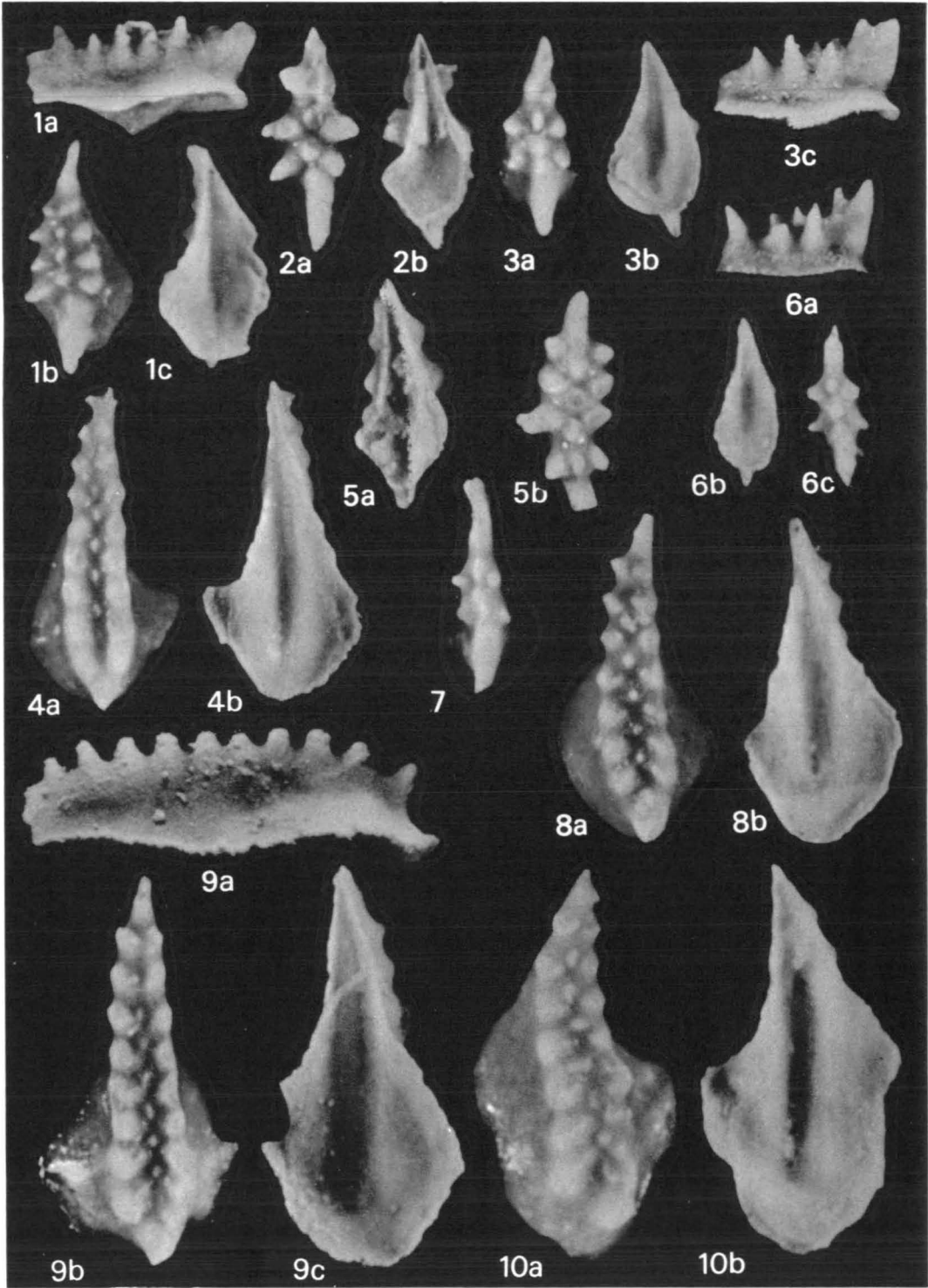


PLATE 33

- Icriodus brevis spicatus* Youngquist & Peterson, 1947 p. 113
Fig. 1a, b, c Lateral, aboral, and oral views of specimen CPC 12487.
Fig. 2a, b Oral and aboral views of specimen CPC 12488.
- Icriodus brevis* subsp. nov. b p. 114
Fig. 3a, b Oral and aboral views of specimen CPC 12490.
Fig. 4a, b Aboral and oral views of specimen CPC 12491.
Fig. 5a, b Aboral and oral views of specimen CPC 12492.
- Icriodus incrassatus* subsp. nov. a p. 115
Fig. 6a, b, c Lateral, oral, and aboral views of specimen CPC 12494.
- Icriodus incrassatus incrassatus* Youngquist & Peterson, 1947 p. 114
Fig. 7a, b, c Lateral, oral and aboral views of specimen CPC 12493.

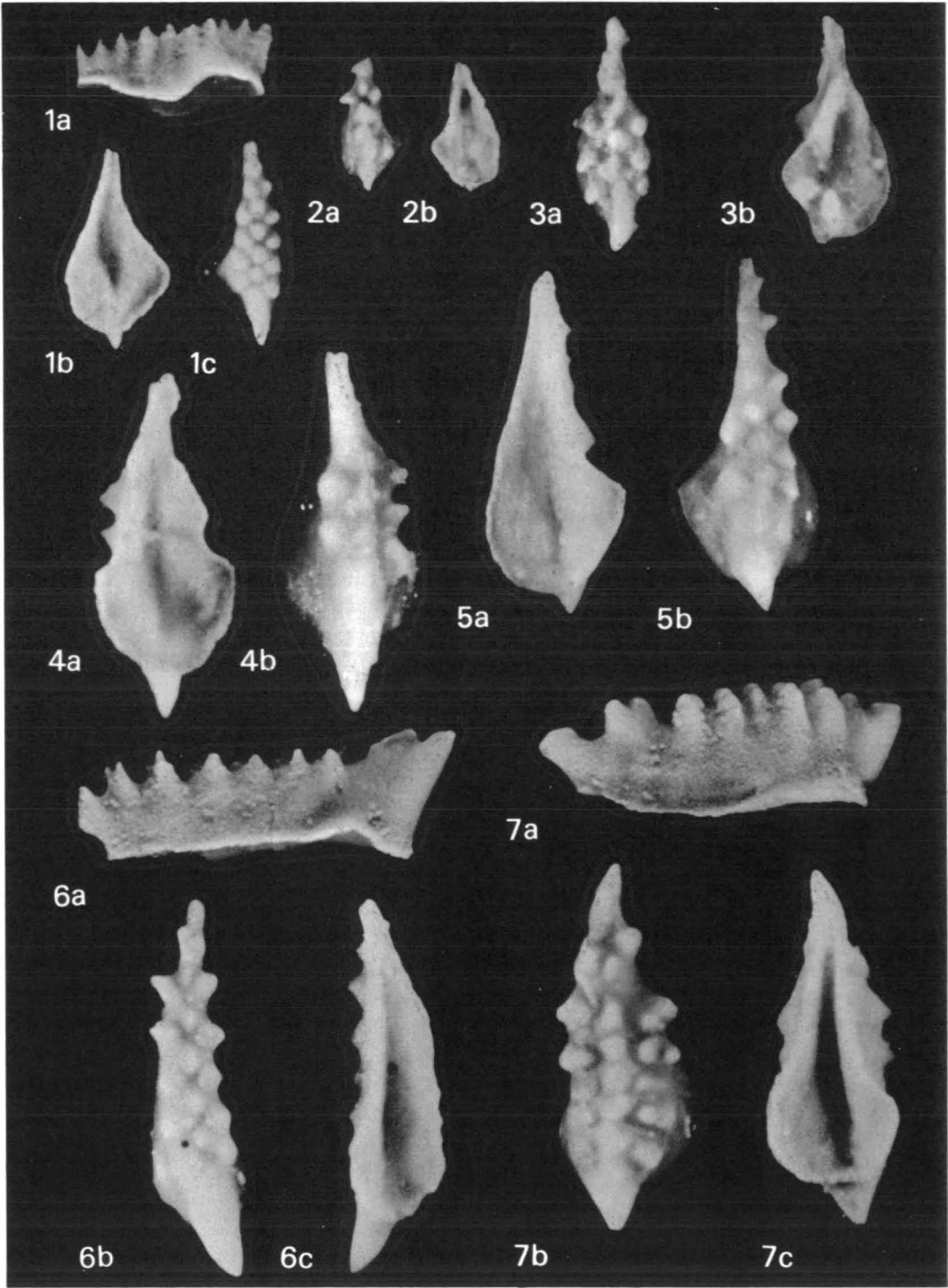


PLATE 34

Icriodus incrassatus subsp. nov. a

p. 115

- Fig. 1a, b Oral and aboral views of specimen CPC 12452.
- Fig. 2a, b Aboral and oral views of specimen CPC 12495.
- Fig. 3a, b Aboral and oral views of specimen CPC 12496.
- Fig. 4a, b Aboral and oral views of specimen CPC 12497.
- Fig. 5 Oral view of specimen CPC 12498.

Icriodus incrassatus subsp. nov. b

p. 115

- Fig. 6a, b, c Lateral, oral, and aboral view of specimen CPC 12499.

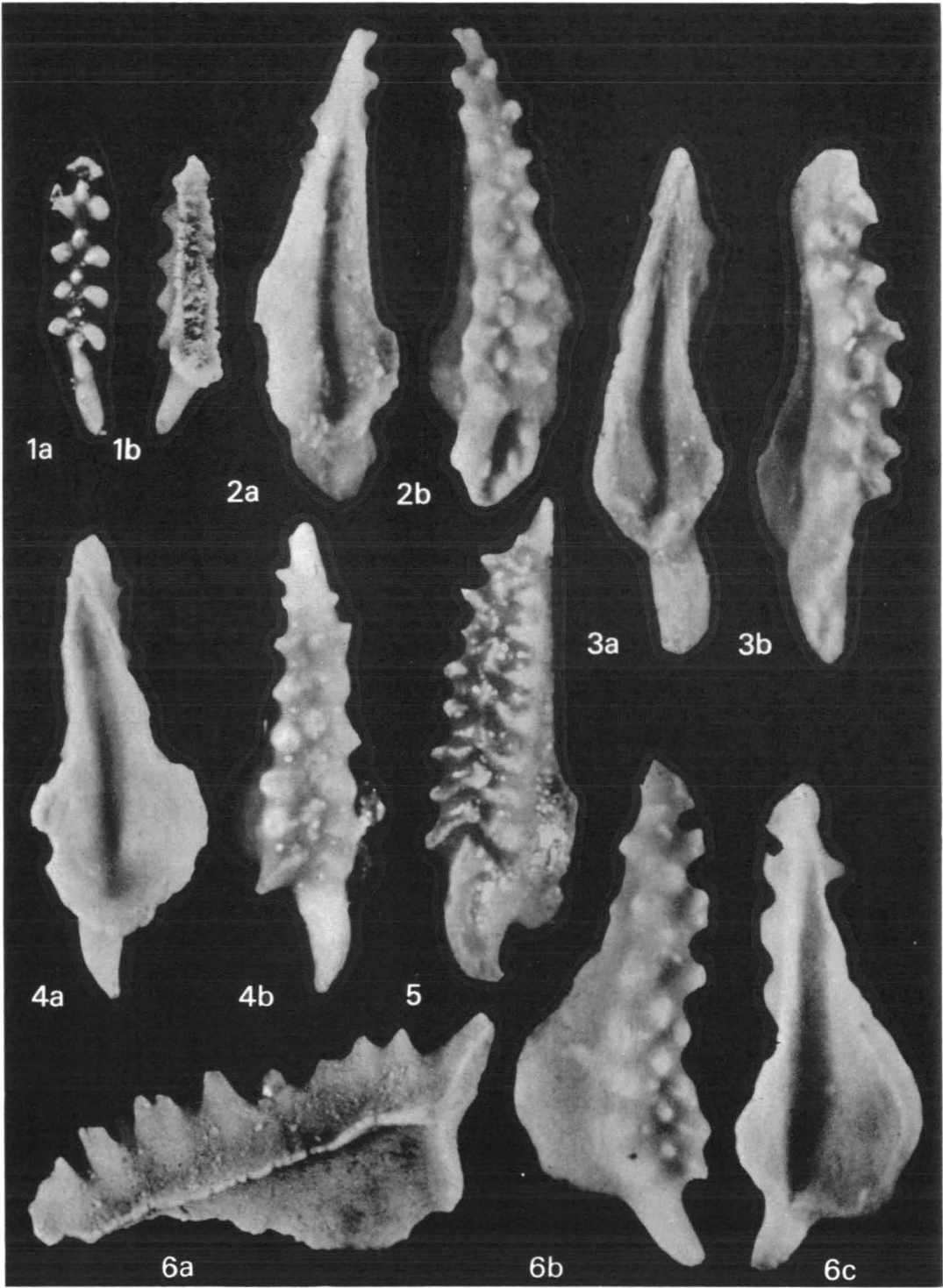


PLATE 35

Icriodus incrassatus subsp. nov. c

p. 116

Fig. 1a, b, c Lateral, aboral, and oral views of specimen CPC 12500.

Fig. 2a, b Aboral and oral views of specimen CPC 12501.

Fig. 3a, b Aboral and oral views of specimen CPC 12502.

Fig. 4a, b Oral and aboral views of specimen CPC 12503.

Icriodus symmetricus symmetricus Branson & Mehl, 1934

p. 116

Fig. 5a, b, c Lateral, aboral, and oral views of specimen CPC 12504.

Fig. 6a, b Oral and aboral views of specimen CPC 12505.

Fig. 7a, b Aboral and oral views of specimen CPC 12506.

Fig. 8a, b Aboral and oral views of specimen CPC 12507.

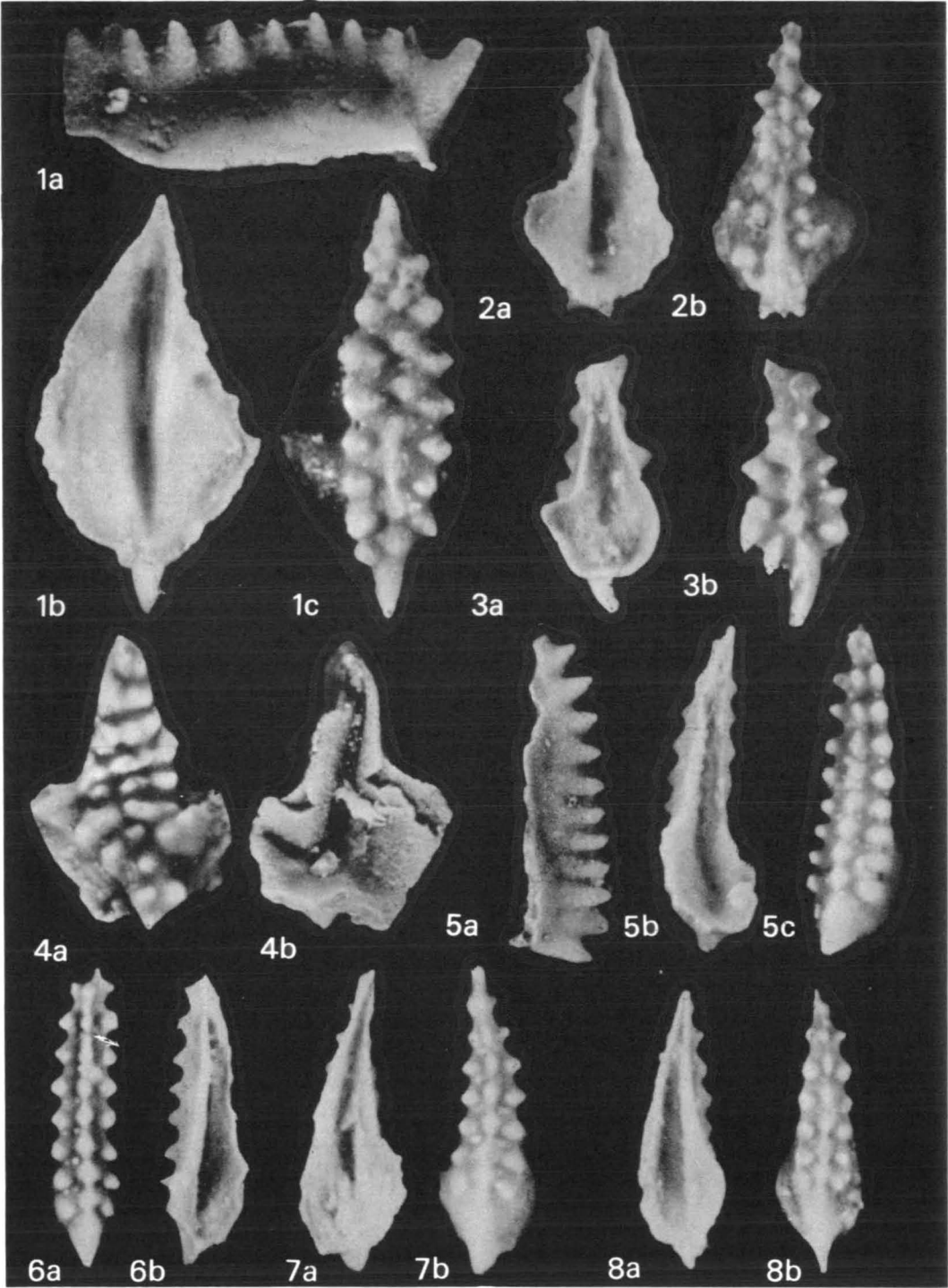


PLATE 36

- Icriodus symmetricus circularis* Youngquist & Peterson, 1947 p. 117
Fig. 1a, b, c Lateral, oral, and aboral views of specimen CPC 12508.
Fig. 2a, b Oral and aboral views of specimen CPC 12509.
Fig. 3a, b Oral and aboral views of specimen CPC 12511.
- Icriodus symmetricus expansus* Branson & Mehl, 1938 p. 118
Fig. 4a, b Oral and aboral views of specimen CPC 12513.
Fig. 5a, b, c Lateral, aboral, and oral views of specimen CPC 12512.
Fig. 6a, b Aboral and oral views of specimen CPC 12514.
Fig. 7a, b Oral and aboral views of specimen CPC 12515.
- Icriodus symmetricus* subsp. nov. a p. 118
Fig. 8a, b Oral and aboral views of specimen CPC 12517.
Fig. 9a, b, c Lateral, aboral, and oral views of specimens CPC 12516.

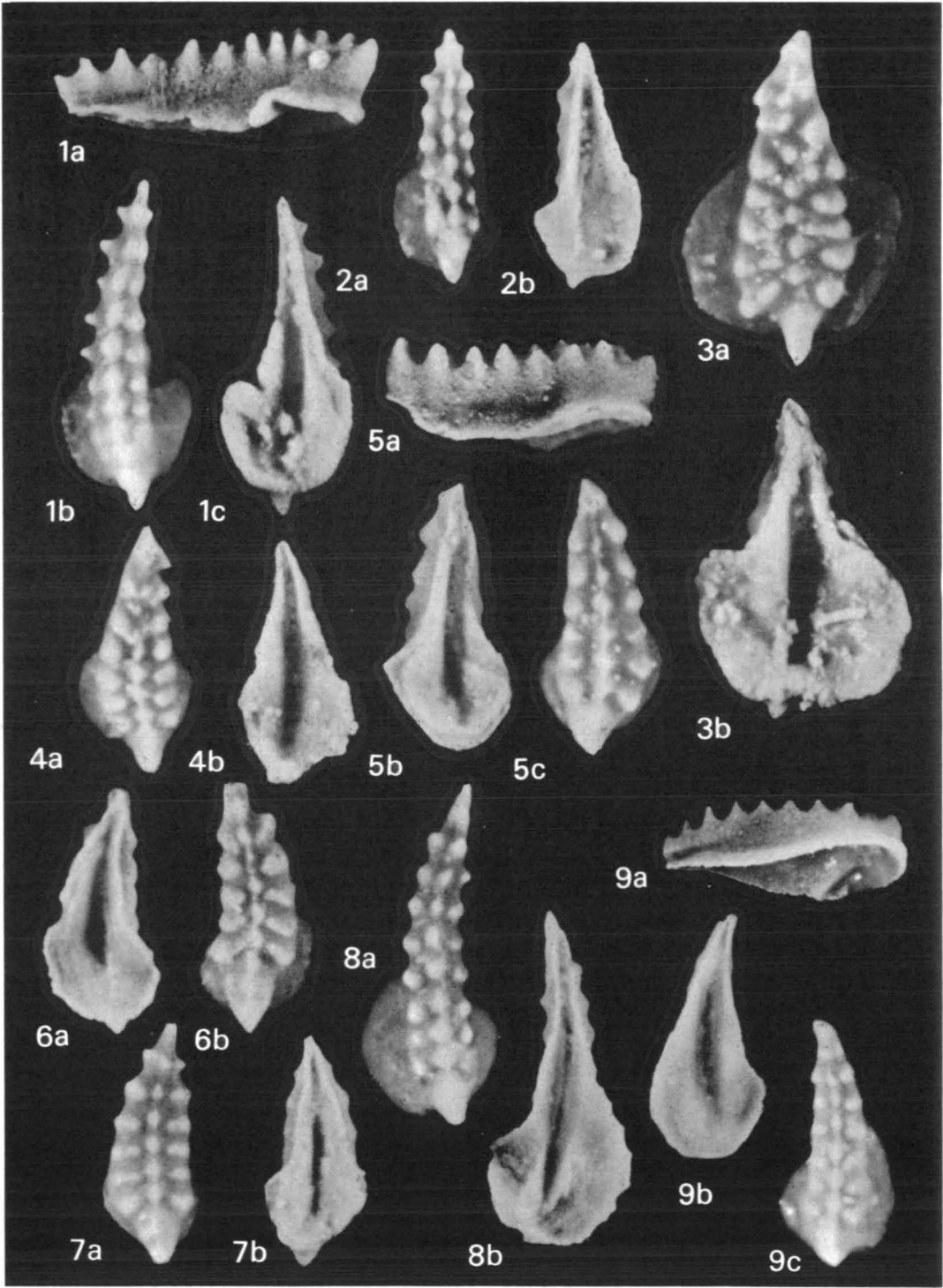


PLATE 37

?*Kladognathus* sp.

p. 122

Fig. 1a, b Lateral views of specimen CPC 12522.

Fig. 2 Lateral view of specimen CPC 12523.

Ligonodina magnidens Ulrich & Bassler, 1926

p. 122

Fig. 3a, b Lateral views of specimen CPC 12524.

Fig. 5 Lateral view of specimen CPC 12525,

Ligonodina panderi (Hinde, 1879)

p. 123

Fig. 4 Lateral view of specimen CPC 12527.

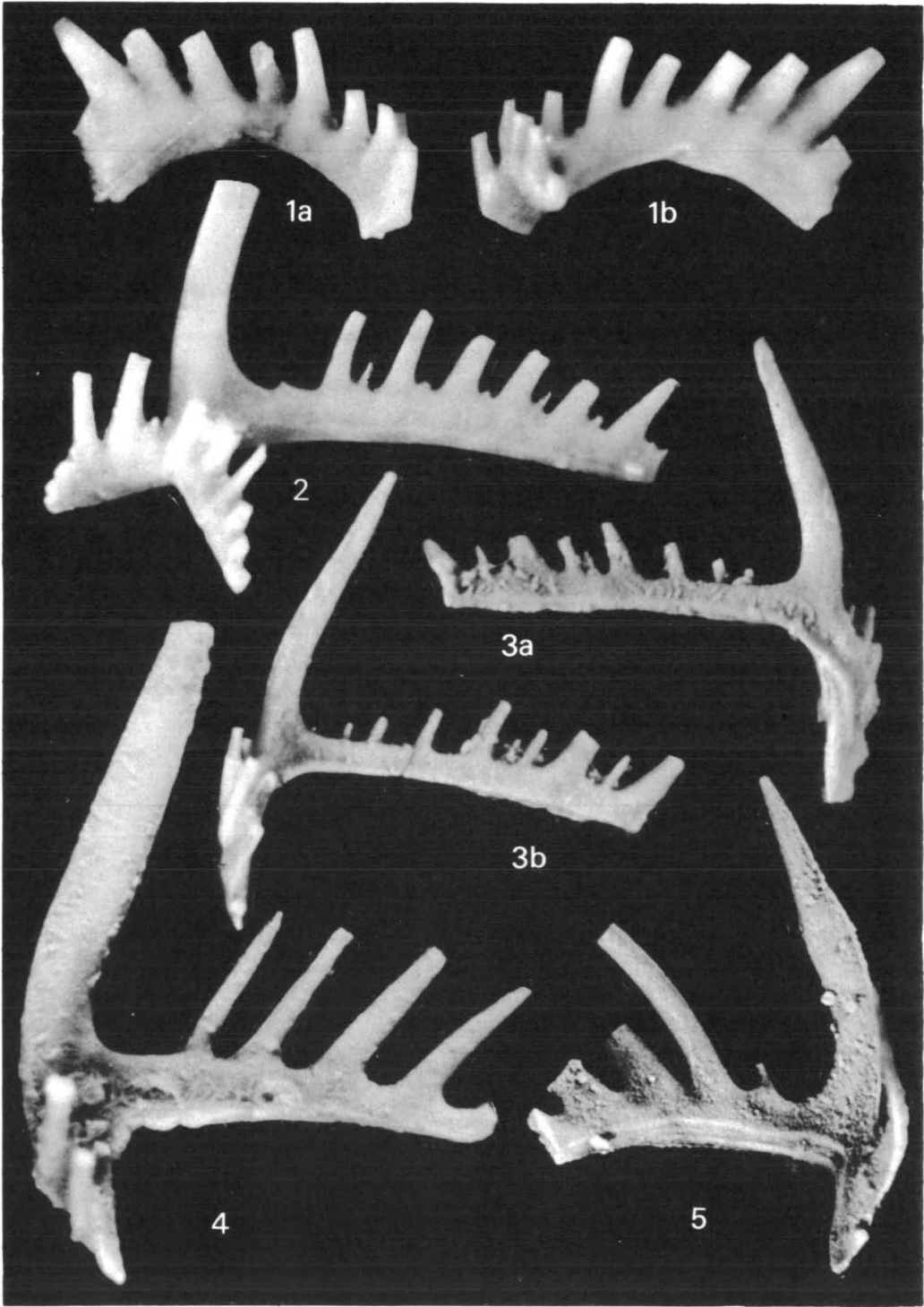


PLATE 38

- Ligonodina spiculata* (Ulrich & Bassler, 1926) p. 124
Fig. 1a, b Lateral views of specimen CPC 12528.
- Ligonodina panderi* (Hinde, 1879) p. 123
Fig. 2a, b Lateral views of specimen CPC 12526.
- Ligonodina* sp. nov. A p. 124
Fig. 3a, b Lateral views of specimen CPC 12529.
- Ligonodina* sp. nov. B p. 124
Fig. 4a, b Lateral views of specimen CPC 12530.

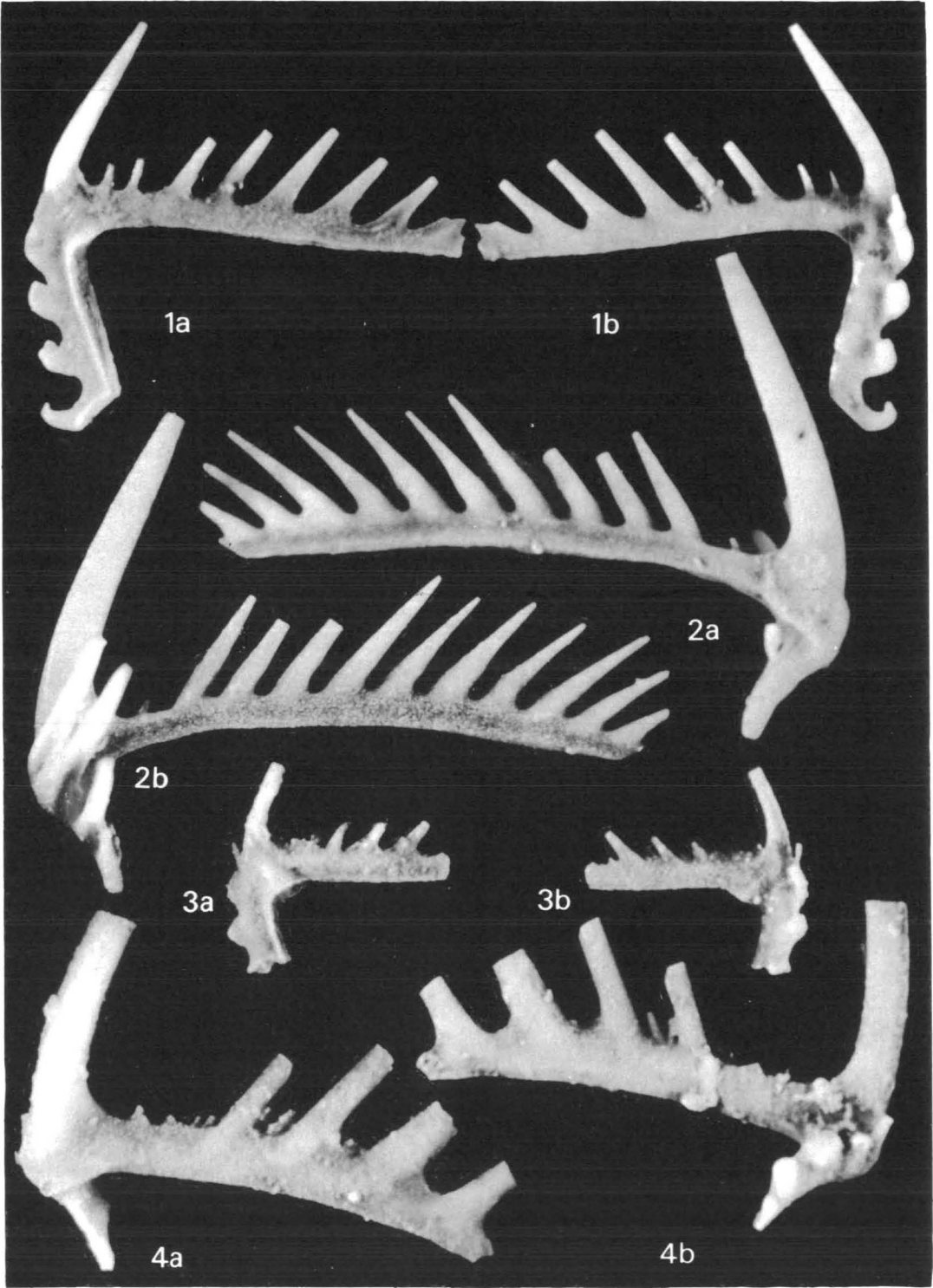


PLATE 39

<i>?Ligonodina</i> sp.	p. 125
Fig. 1a, b	Lateral views of specimen CPC 12532.
<i>Ligonodina</i> sp.	p. 124
Fig. 2	Lateral view of specimen CPC 12531.
<i>Neoprioniodus armatus-alatus</i> group	p. 127
Fig. 3a, b	Lateral views of specimens of <i>Neoprioniodus armatus</i> (Hinde, 1879), CPC 12536.
Fig. 4a, b	Lateral views of specimen of <i>Neoprioniodus armatus</i> (Hinde, 1879), CPC 12535.
Fig. 5a, b	Lateral views of specimen of <i>Neoprioniodus alatus</i> (Hinde, 1879), CPC 12533.
Fig. 6a, b	Lateral views of specimens of a form intermediate between <i>N. armatus</i> and <i>N. alatus</i> , CPC 12534.

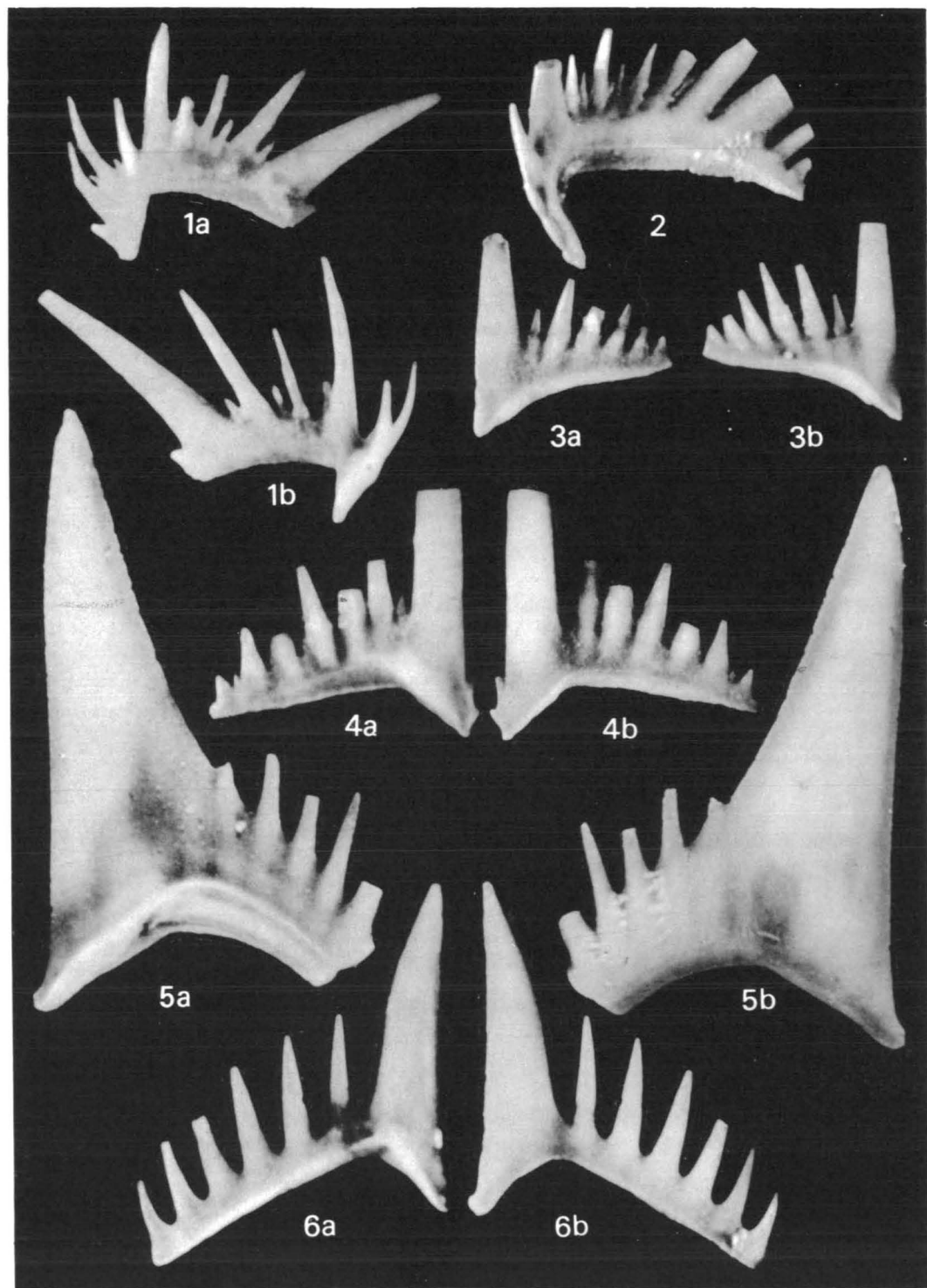


PLATE 40

- Neoprioniodus armatus-alatus* group p. 127
- Fig. 1a, b Lateral views of a specimen intermediate between *N. armatus* and *N. alatus* CPC 12537.
- Fig. 5a, b Lateral views of specimen of *N. armatus* with dentition on the antecusp CPC 12538.
- Neoprioniodus* sp. nov. A p. 128
- Fig. 2a, b Lateral views of specimen with crowded bar dentition and a denticulate antecusp, CPC 12539.
- Neoprioniodus semiseparatus* (Branson & Mehl, 1934) p. 128
- Fig. 4 Lateral view showing posterior bar dentition and denticulate antecusp, CPC 12540.
- Fig. 6 Lateral view showing flared cavity lip, CPC 12541.
- Nothognathella abbreviata* Branson & Mehl, 1934. p. 130
- Fig. 3a, b Lateral views of specimen CPC 12542.
- Nothognathella abnormis* Branson & Mehl, 1934 p. 131
- Fig. 7a, b Lateral views of specimen CPC 12543.
- Fig. 8a, b Lateral views of specimen CPC 12544.
- Fig. 9a, b Lateral views of specimen CPC 12545.
- Fig. 10, a, b, c Lateral, aboral, and oral views of specimen CPC 12546.

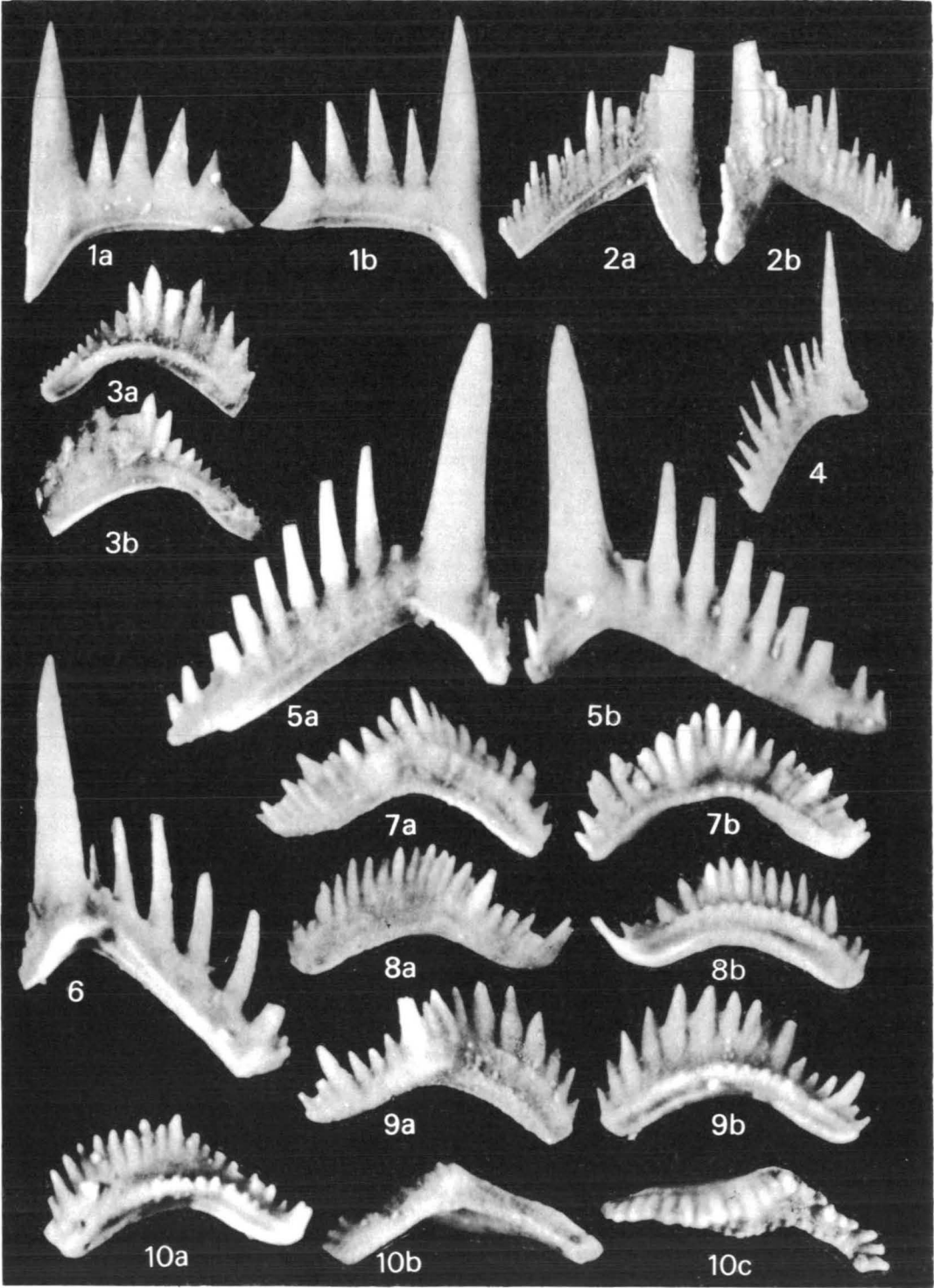


PLATE 41

Nothognathella brevidonta Youngquist, 1947

p. 132

Fig. 1a, b, c Lateral, oral, and aboral views of specimen CPC 12547.

Fig. 2a, b Oral and aboral views of specimen CPC 12548.

Fig. 3a, b Oral and aboral views of specimen CPC 12550.

Fig. 4a, b Aboral and oral views of specimen CPC 12549.

Nothognathella falcata Helms, 1959

p. 133

Fig. 5 Oral view of specimen CPC 12554.

Fig. 6a, b Oral and aboral views of specimen CPC 12551.

Fig. 7a, b Oral and aboral views of specimen CPC 12553.

Fig. 8a, b Aboral and oral views of specimen CPC 12552.

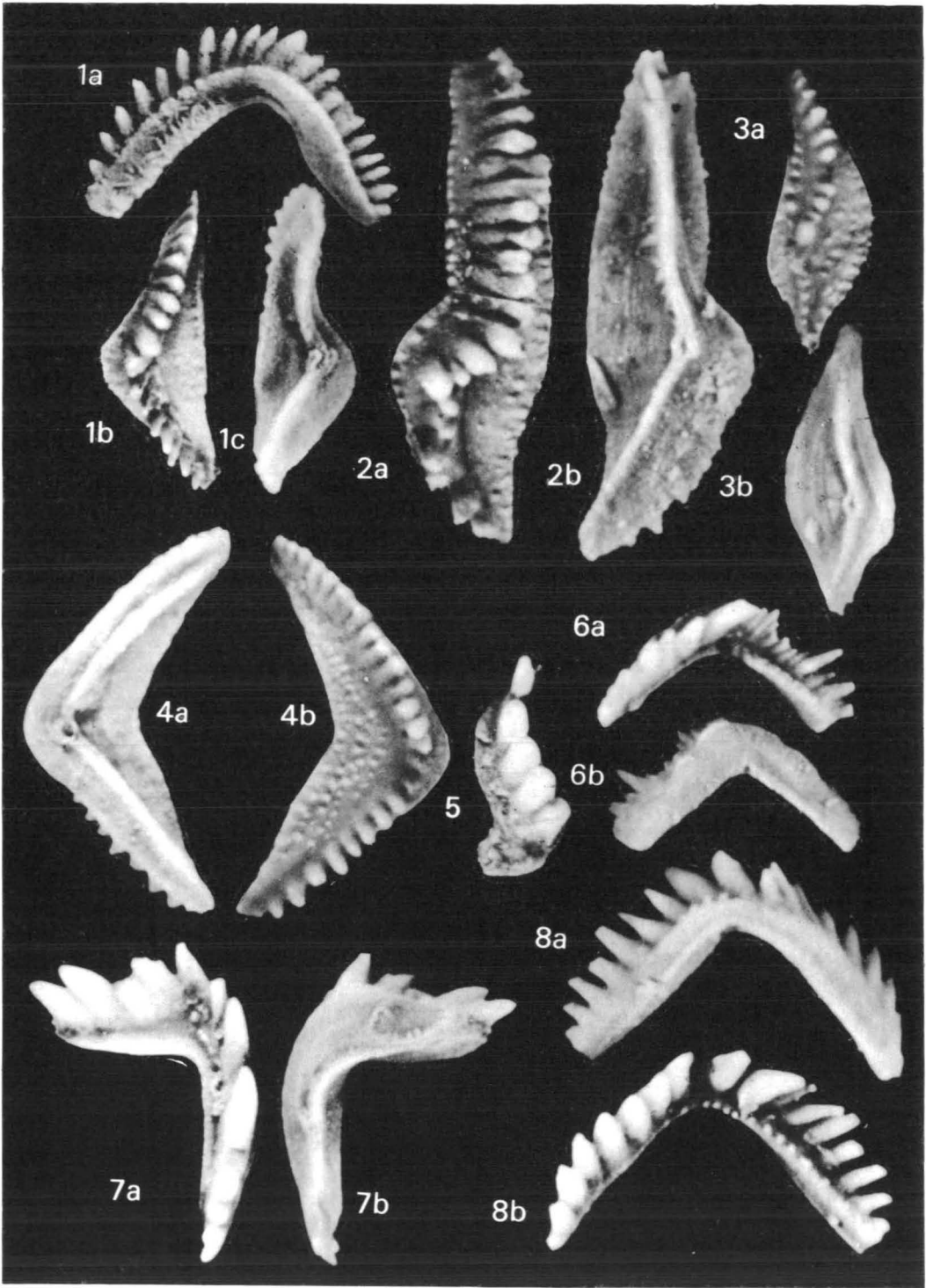


PLATE 42

- Nothognathella iowaensis* Youngquist, 1945 p. 134
Fig. 1a, b, c Lateral, oral, and aboral views of specimen CPC 12555.
Fig. 2a, b Aboral and oral views of specimen CPC 12556.
- Nothognathella klapperi* Uyeno, 1967 p. 135
Fig. 4a, b Latero-oral and outer lateral views of specimen CPC 12557.
- Nothognathella palmatoformis* sp. nov. p. 135
Fig. 3a, b, c Lateral, aboral, and oral views of **holotype**, CPC 12558.
Fig. 5a, b Aboral and oral views of paratype CPC 12559.
Fig. 6a, b Oral and aboral views of paratype CPC 12561.
Fig. 7a, b Oral and aboral views of paratype CPC 12560.
- Nothognathella polygnathoidea* Branson & Mehl, 1934 p. 137
Fig. 8a, b, c Lateral, aboral, and oral views of specimen CPC 12562.

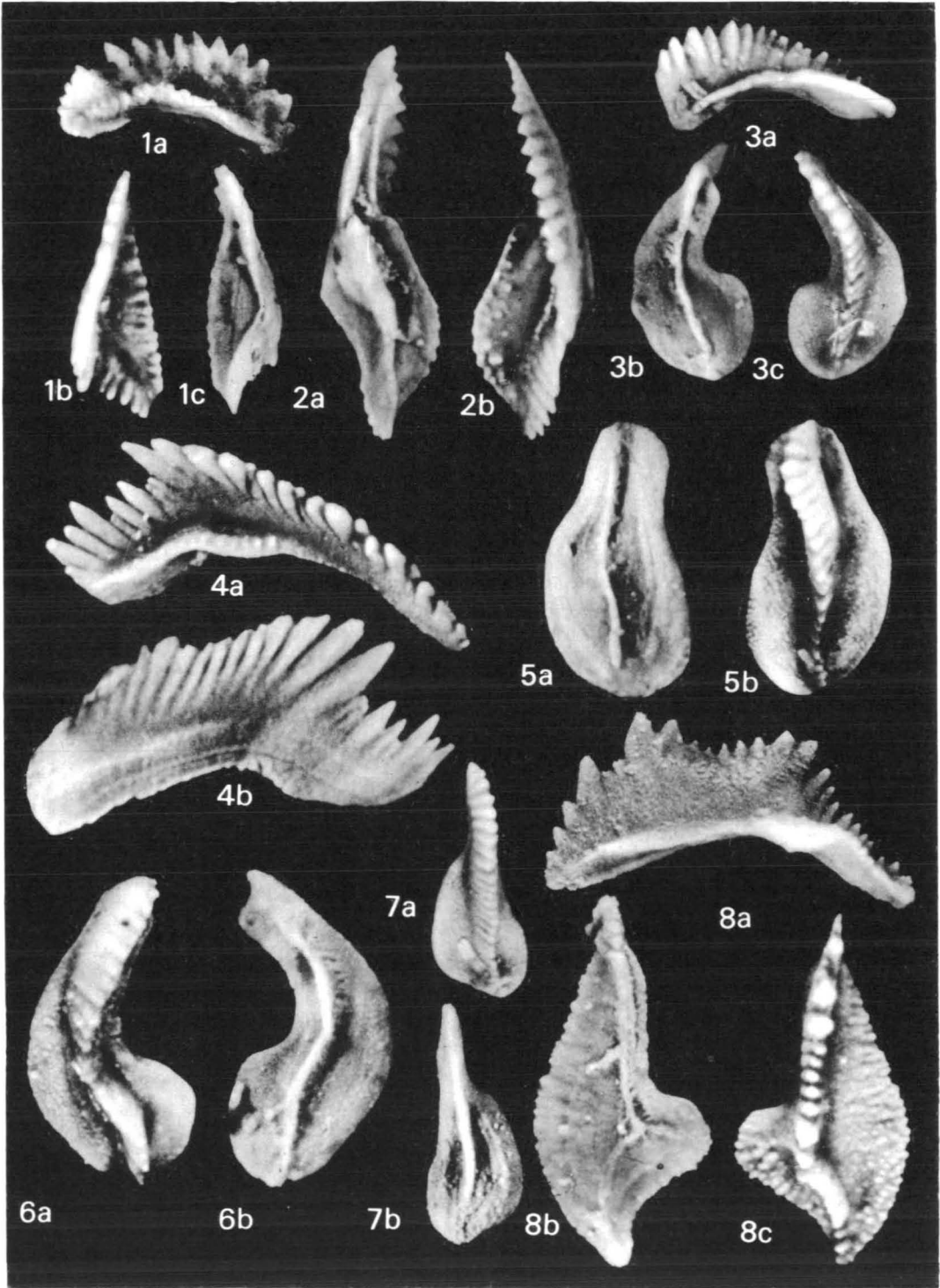


PLATE 43

Nothognathella typicalis Branson & Mehl, 1934

p. 138

Fig. 1a, b, c Lateral, oral, and aboral views of specimen CPC 12563.

Fig. 2a, b Aboral and oral views of specimen CPC 12565.

Fig. 3a, b Oral and aboral views of specimen CPC 12566.

Fig. 4a, b Aboral and oral views of specimen CPC 12564.

Nothognathella sp. nov. A

p. 139

Fig. 5a, b Lateral views of specimen CPC 12568.

Fig. 6a, b Latero-oral and latero-aboral views of specimen CPC 12567.

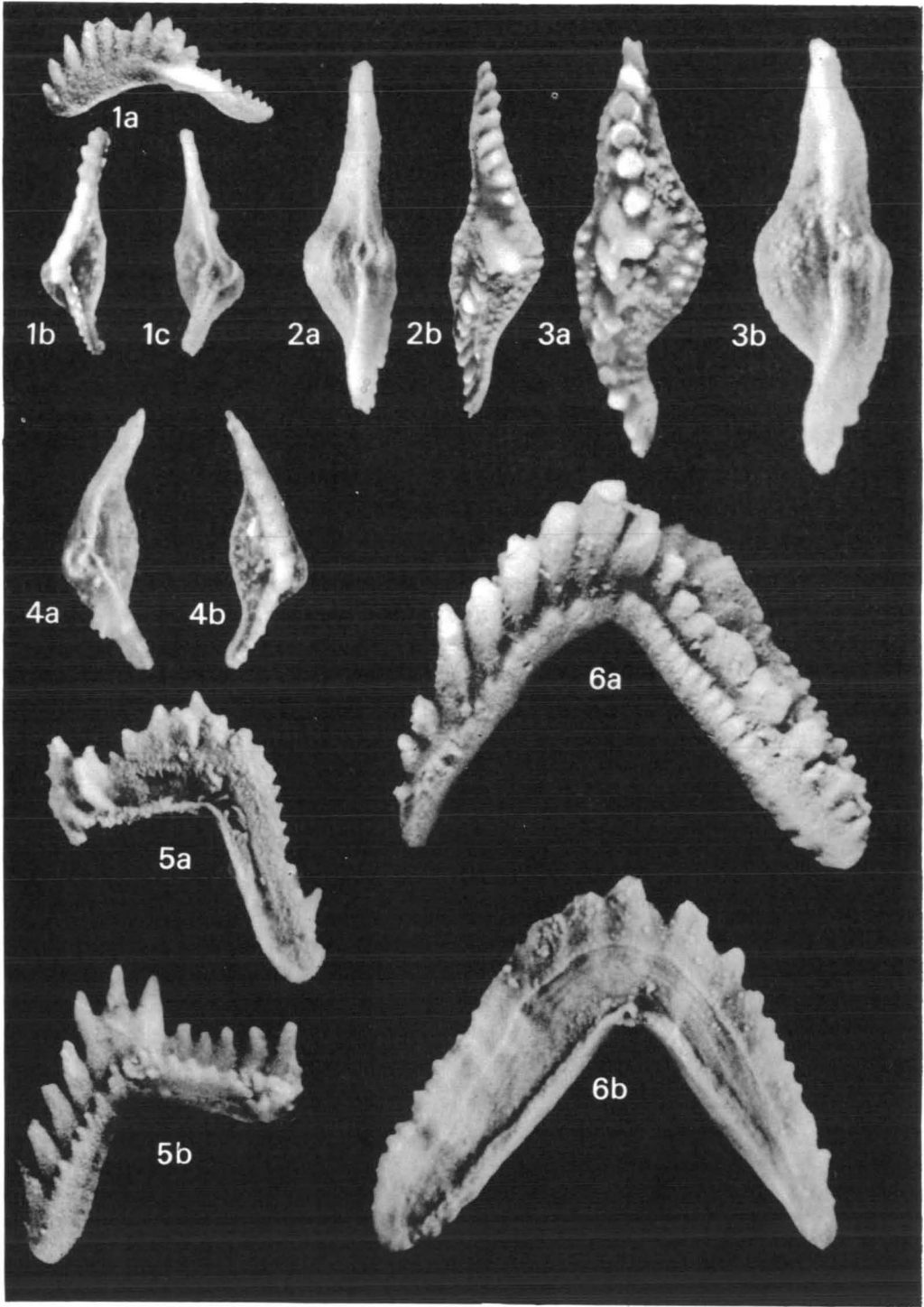


PLATE 44

Lonchodina perlonga Ulrich & Bassler, 1926

p. 126

Fig. 1a, b, c Two lateral views and an aboral view of specimen CPC 12835.

Lonchodina arcuata Ulrich & Bassler, 1926

p. 125

Fig. 2a, b Lateral and aboral views of specimen CPC 12832.

Fig. 3a, b Lateral and aboral views of specimen CPC 12833.

Fig. 4a, b Lateral and aboral views of specimen CPC 12834.

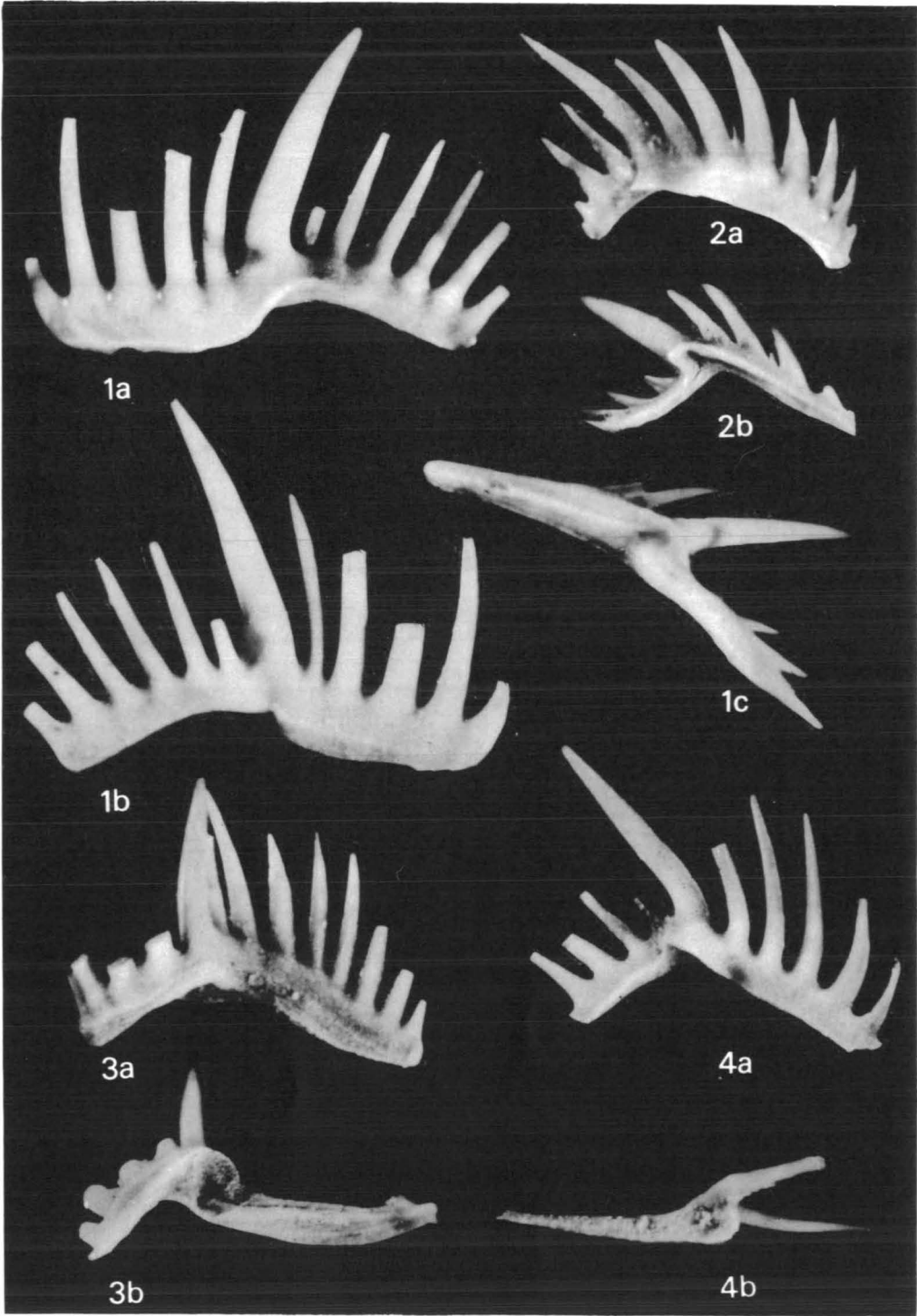


PLATE 45

- Lonchodina perlonga* Ulrich & Bassler, 1926 p. 126
Fig. 1a, b Lateral and aboral views of specimen CPC 12836.
- Lonchodina typicalis* Bassler, 1925 p. 126
Fig. 2 Lateral view of specimen CPC 12837.
Fig. 3 Lateral view of specimen CPC 12838.
Fig. 5 Lateral view of specimen CPC 12839.
- Lonchodina* sp. nov. A p. 126
Fig. 4a, b Oral and aboral views of specimen CPC 12840.
Fig. 6 Lateral view of specimen CPC 12841.

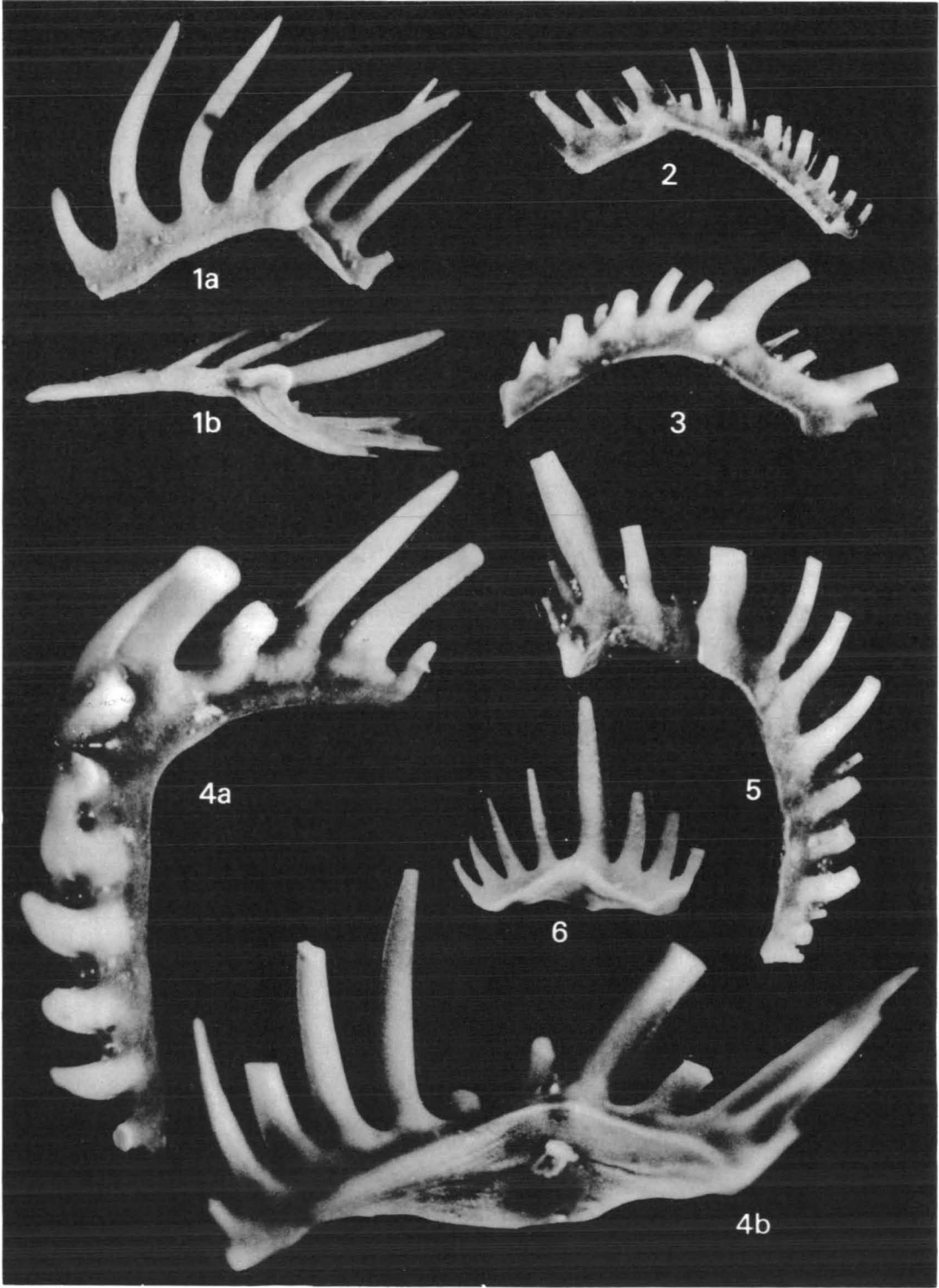


PLATE 46

Lonchodina sp. nov. A

p. 126

Fig. 1 Aboro-lateral view of specimen CPC 12843.

Ozarkodina? sp. Seddon, 1970

p. 145

Fig. 2a, b Lateral views of specimen CPC 12846.

Fig. 3 Lateral view of specimen CPC 12845.

Fig. 4a, b Lateral views of specimen CPC 12844.

Fig. 5a, b Lateral views of specimen CPC 12847.

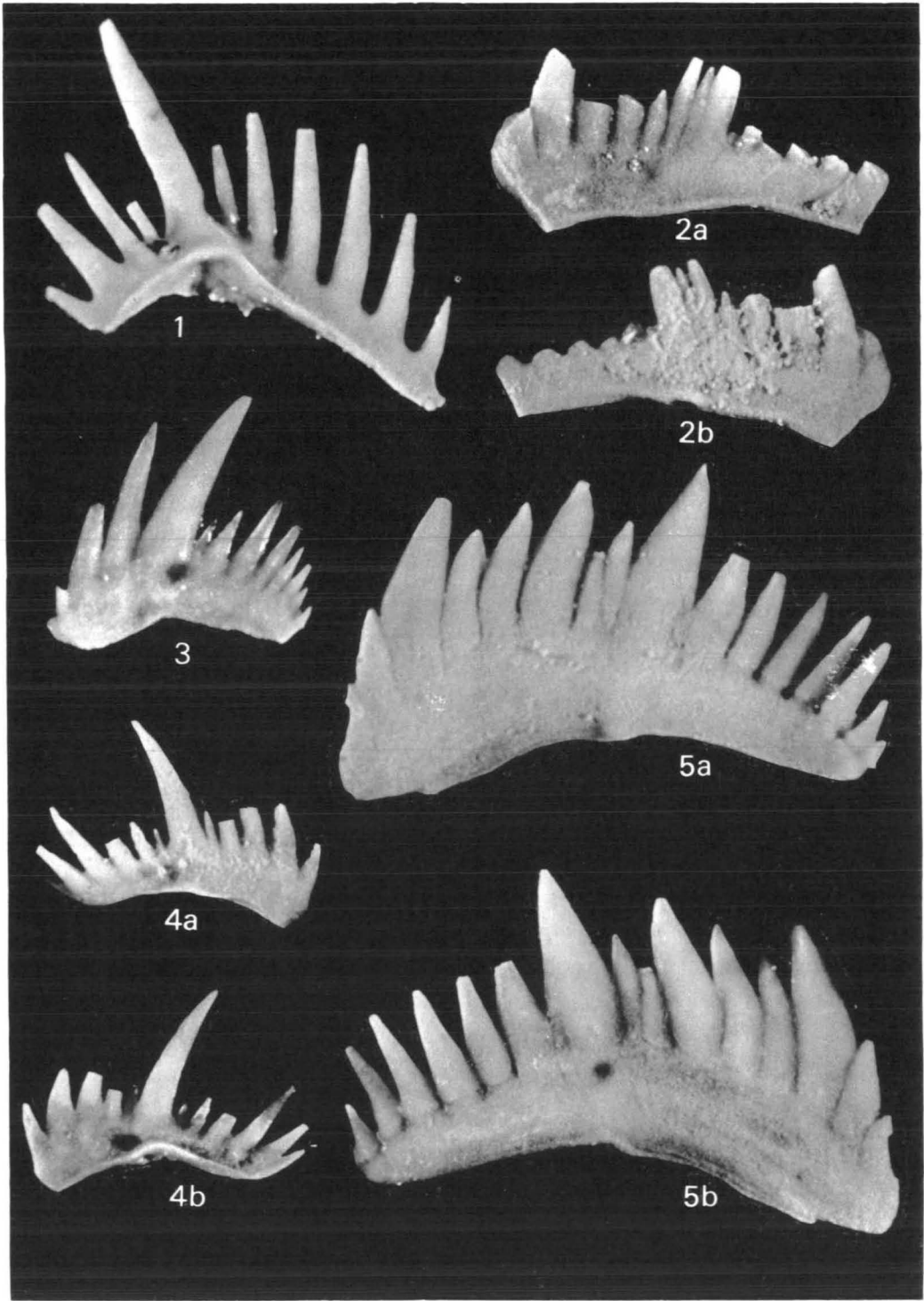


PLATE 47

Ozarkodina homoarcuata Helms, 1959

p. 139

Fig. 1a, b Lateral views of specimen CPC 12569.

Fig. 3a, b Lateral views of specimen CPC 12570.

Ozarkodina immersa (Hinde, 1879)

p. 140

Fig. 2a, b Lateral views of specimen CPC 12571.

Fig. 4a, b Lateral views of specimen CPC 12572.

cf. *Ozarkodina? lacera* Helms, 1959

p. 141

Fig. 5a, b Lateral views of specimen CPC 12518.

Fig. 6a, b Lateral views of specimen CPC 12519.

Fig. 7a, b Lateral views of specimen CPC 12521.

Fig. 8a, b Lateral views of specimen CPC 12520.

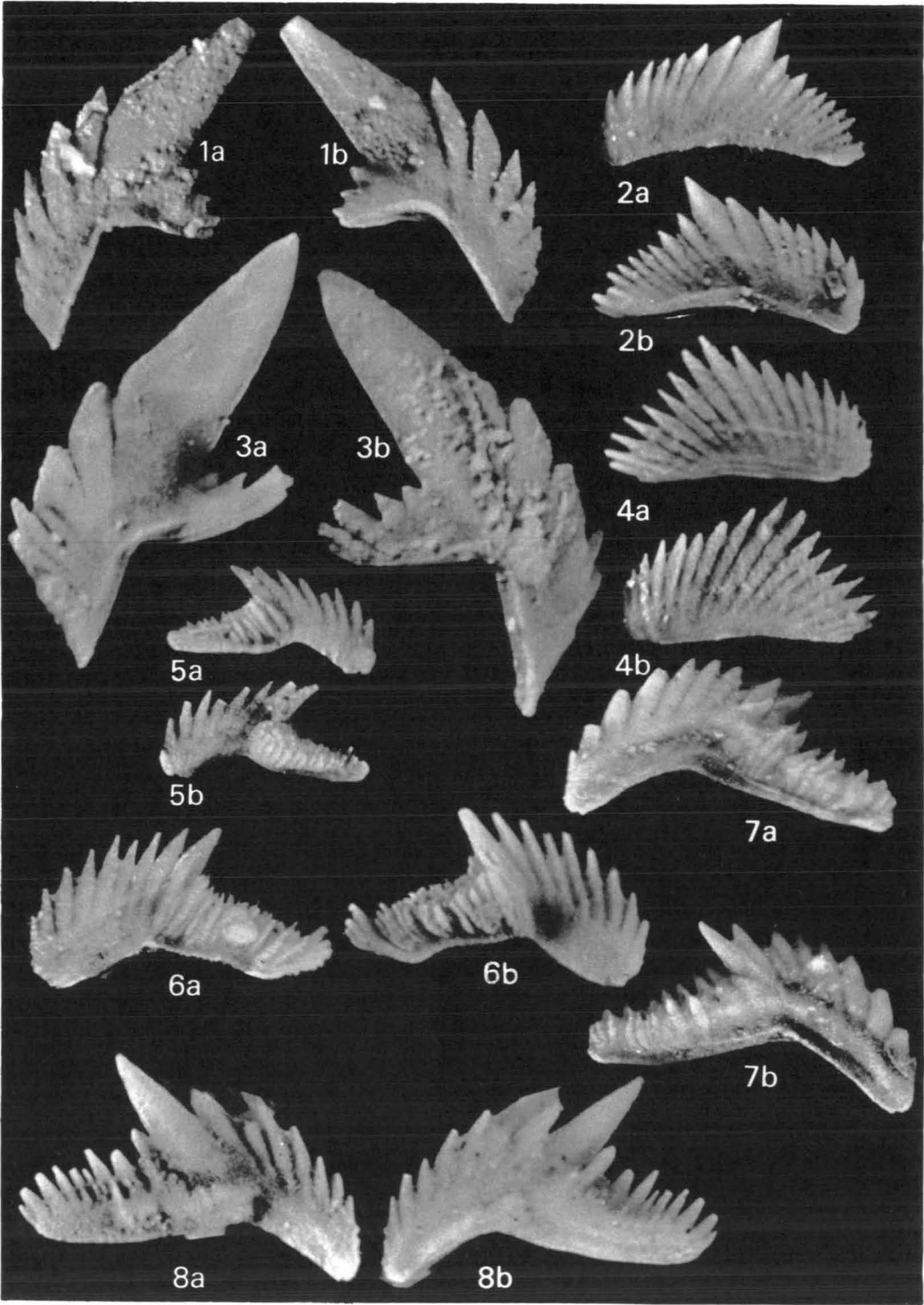


PLATE 48

Ozarkodina macra Branson & Mehl, 1934

p. 142

Fig. 1a, b Lateral views of specimen CPC 12574.

Fig. 2a, b Lateral views of specimen CPC 12576.

Ozarkodina versa (Stauffer, 1940)

p. 143

Fig. 3a, b Lateral views of specimen CPC 12577.

Ozarkodina sp. nov. A

p. 143

Fig. 4 Lateral view of specimen CPC 12578.

Ozarkodina sp. nov. B

p. 143

Fig. 5a, b Lateral views of specimen CPC 12579.

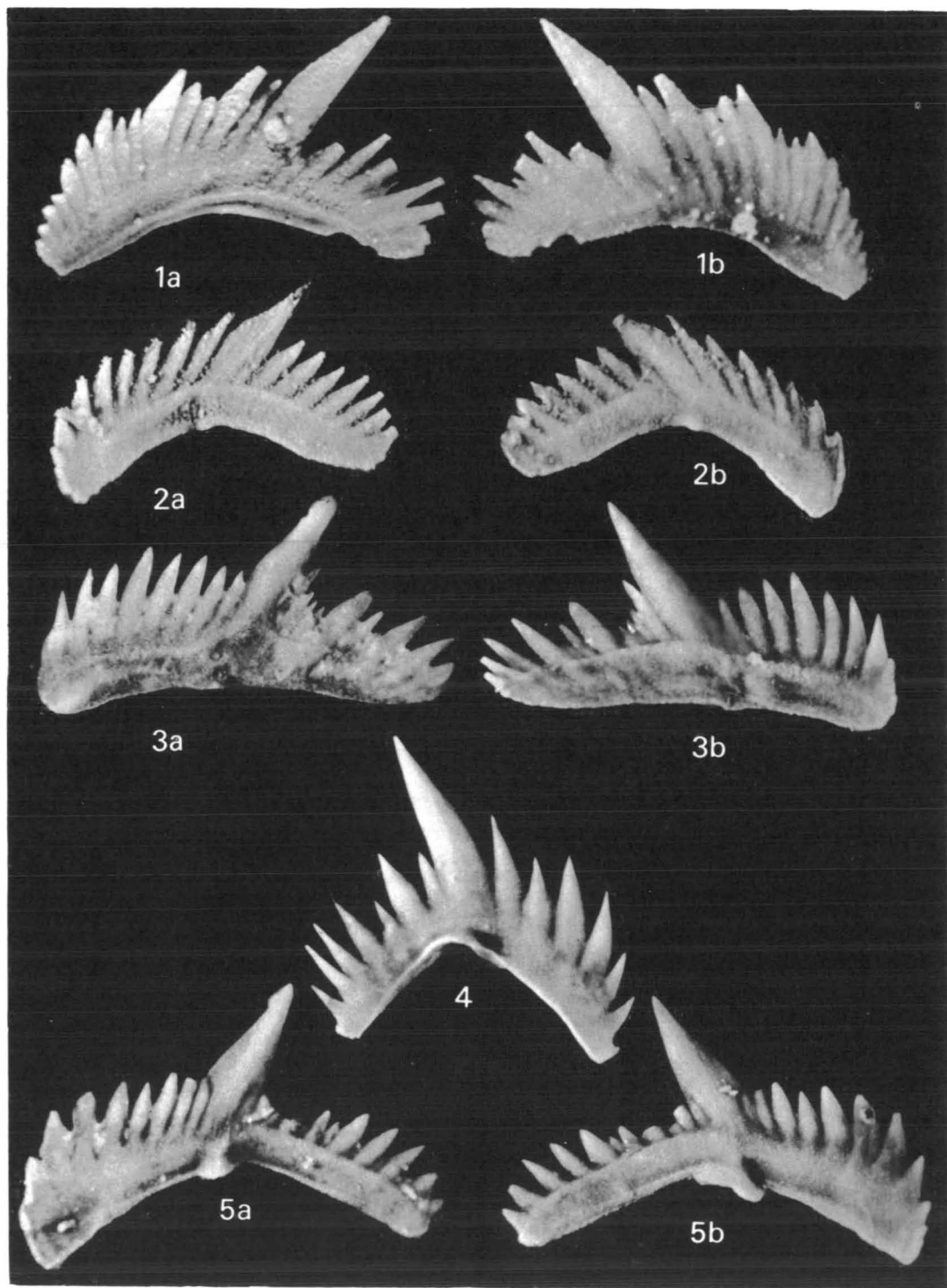


PLATE 49

<i>Ozarkodina</i> sp. nov. B	p. 143
Fig. 1a, b Lateral views of specimen CPC 12580.	
<i>Ozarkodina</i> sp. nov. D	p. 144
Fig. 2a, b Lateral views of specimen CPC 12582.	
<i>Ozarkodina</i> sp. nov. C	p. 144
Fig. 4a, b Lateral views of specimen CPC 12581.	
<i>Ozarkodina</i> sp. E	p. 144
Fig. 3 Lateral view of specimen CPC 12583.	
<i>Ozarkodina</i> sp. F	p. 144
Fig. 5 Lateral view of specimen CPC 12584.	
<i>Palmatodella</i> sp. nov. A	p. 147
Fig. 6 Lateral view of specimen CPC 12586.	
<i>Palmatodella unca</i> Sannemann, 1955	p. 146
Fig. 7a, b Lateral views of specimen CPC 12585.	

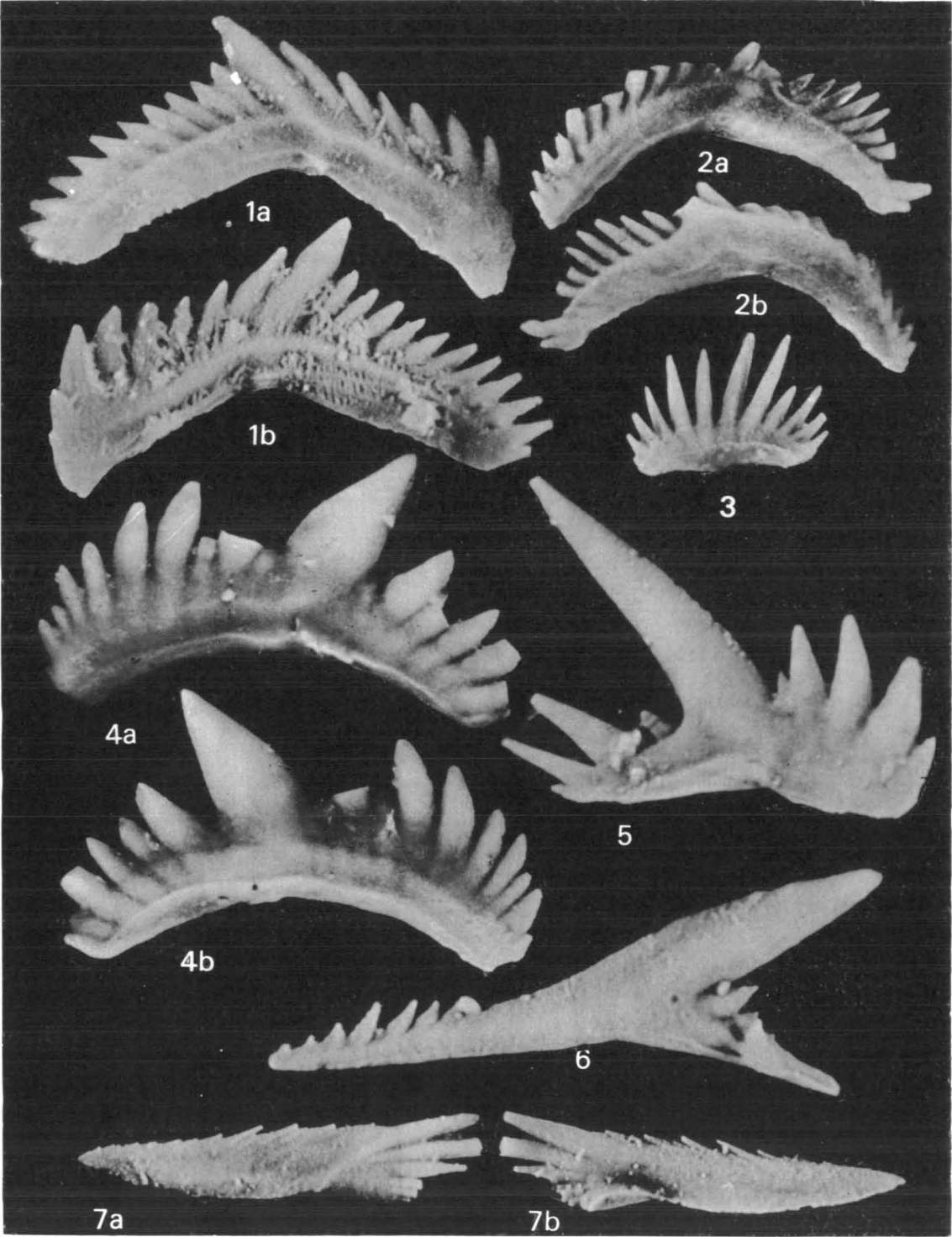


PLATE 50

Palmatolepis delicatula delicatula Branson & Mehl, 1934

p. 147

Fig. 1a, b, c Lateral, oral, and aboral views of specimen CPC 12587.

Fig. 2a, b Oral and aboral views of specimen CPC 12588.

Fig. 3 Oral view of specimen CPC 12589.

Fig. 4a, b Aboral and oral views of specimen CPC 12590.

Palmatolepis foliacea Youngquist, 1945

p. 150

Fig. 5a, b, c Lateral, oral, and aboral views of specimen CPC 12592.

Fig. 6a, b Oral and aboral views of specimen CPC 12593.

Fig. 7a, b Aboral and oral views of specimen CPC 12594.

Fig. 8a, b Oral and aboral views of specimen CPC 12595.

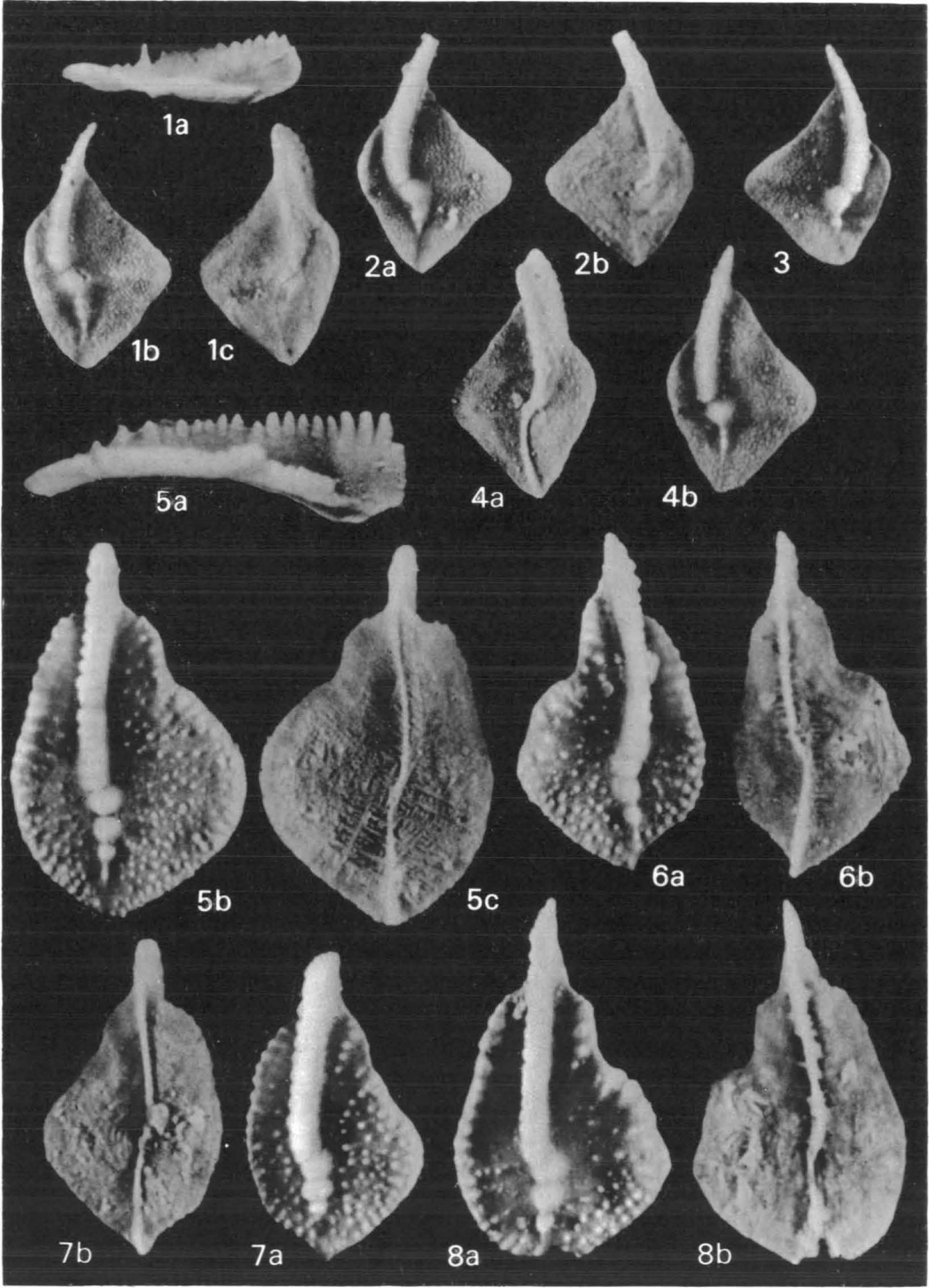


PLATE 51

Palmatolepis distorta Branson & Mehl, 1934

p. 148

Fig. 1a, b Aboral and oral views of specimen CPC 12591.

Palmatolepis glabra glabra Ulrich & Bassler, 1926

p. 152

Fig. 2a, b, c Lateral, aboral, and oral views of specimen 12596.

Fig. 3a, b Aboral and oral views of specimen CPC 12597.

Fig. 4a, b Oral and aboral views of specimen CPC 12598.

Fig. 5a, b Aboral and oral views of specimen CPC 12599.

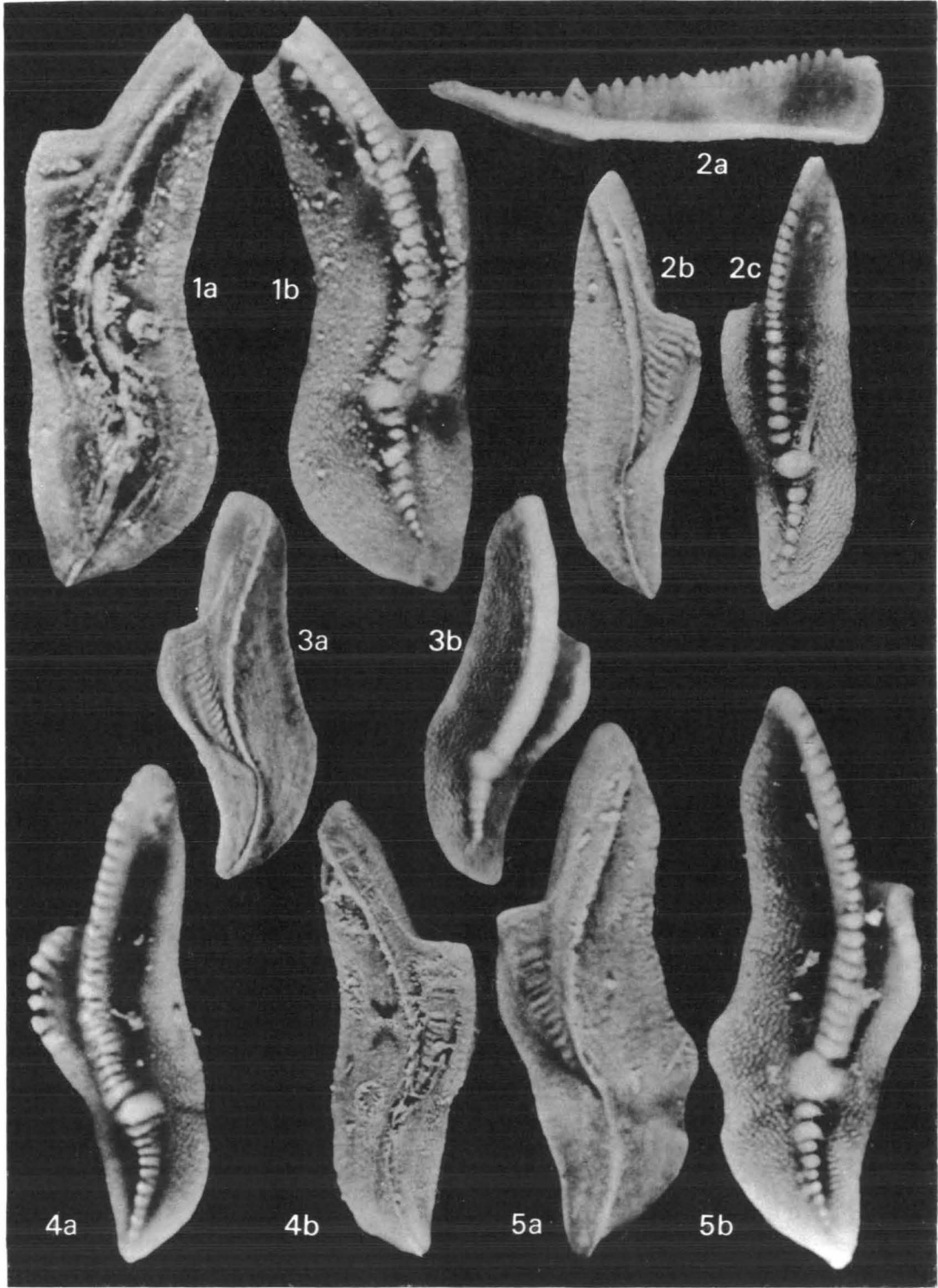


PLATE 52

Palmatolepis glabra elongata Holmes, 1928

p. 155

Fig. 1a, b, c Lateral, aboral, and oral views of specimen CPC 12600.

Fig. 4a, b Aboral and oral views of specimen CPC 12601.

Palmatolepis glabra pectinata Ziegler, 1962

p. 156

Fig. 2a, b Aboral and oral views of specimen CPC 12604.

Fig. 5a, b Lateral and oral views of specimen CPC 12603.

Palmatolepis glabra acuta Helms, 1963

p. 154

Fig. 3 Oral view of specimen CPC 12602.

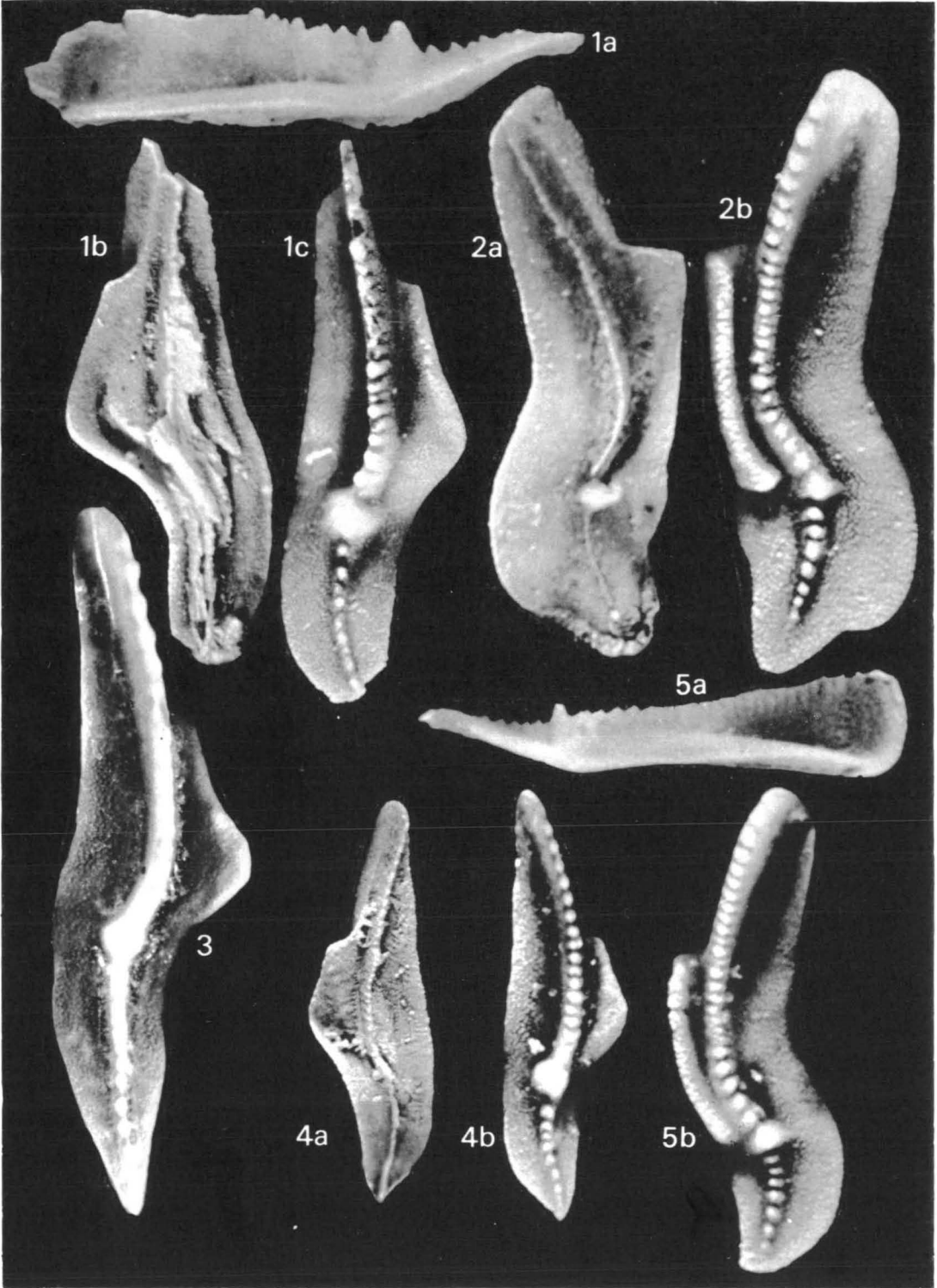


PLATE 53

Palmatolepis glabra pectinata Ziegler, 1962

p. 156

Fig. 1a, b Aboral and oral views of specimen CPC 12605.

Fig. 2a, b Aboral and oral views of specimen CPC 12606.

Fig. 3a, b Aboral and oral views of specimen CPC 12608.

Palmatolepis glabra acuta Helms, 1963

p. 154

Fig. 4 Oral view of specimen CPC 12607.

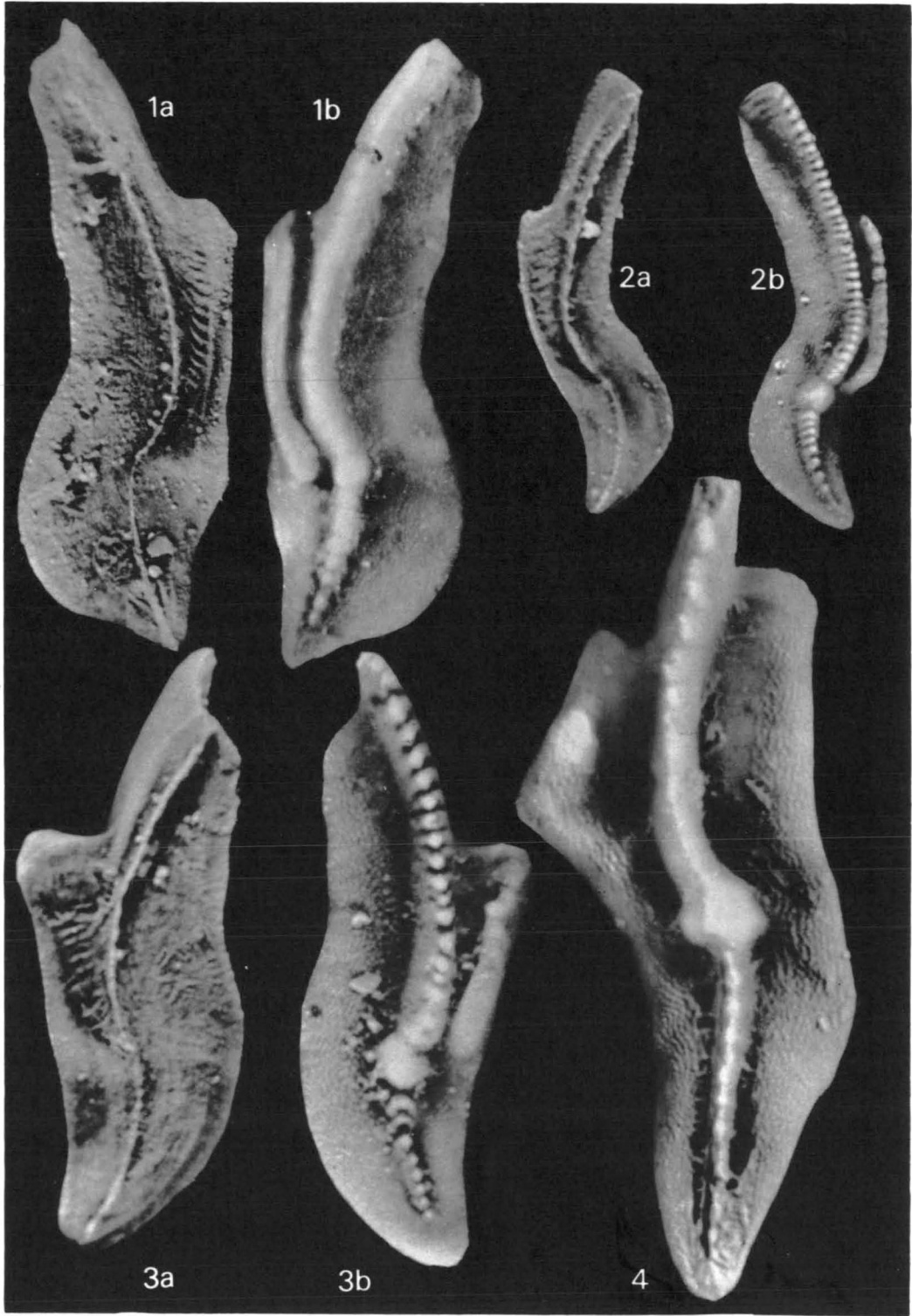


PLATE 54

Palmatolepis proversa Ziegler, 1958

p. 163

Fig. 1a, b Aboral and oral views of specimen CPC 12632.

Fig. 2a, b Oral and aboral views of specimen CPC 12633.

Palmatolepis punctata (Hinde, 1879)

p. 164

Fig. 3a, b Oral and aboral views of specimen CPC 12635.

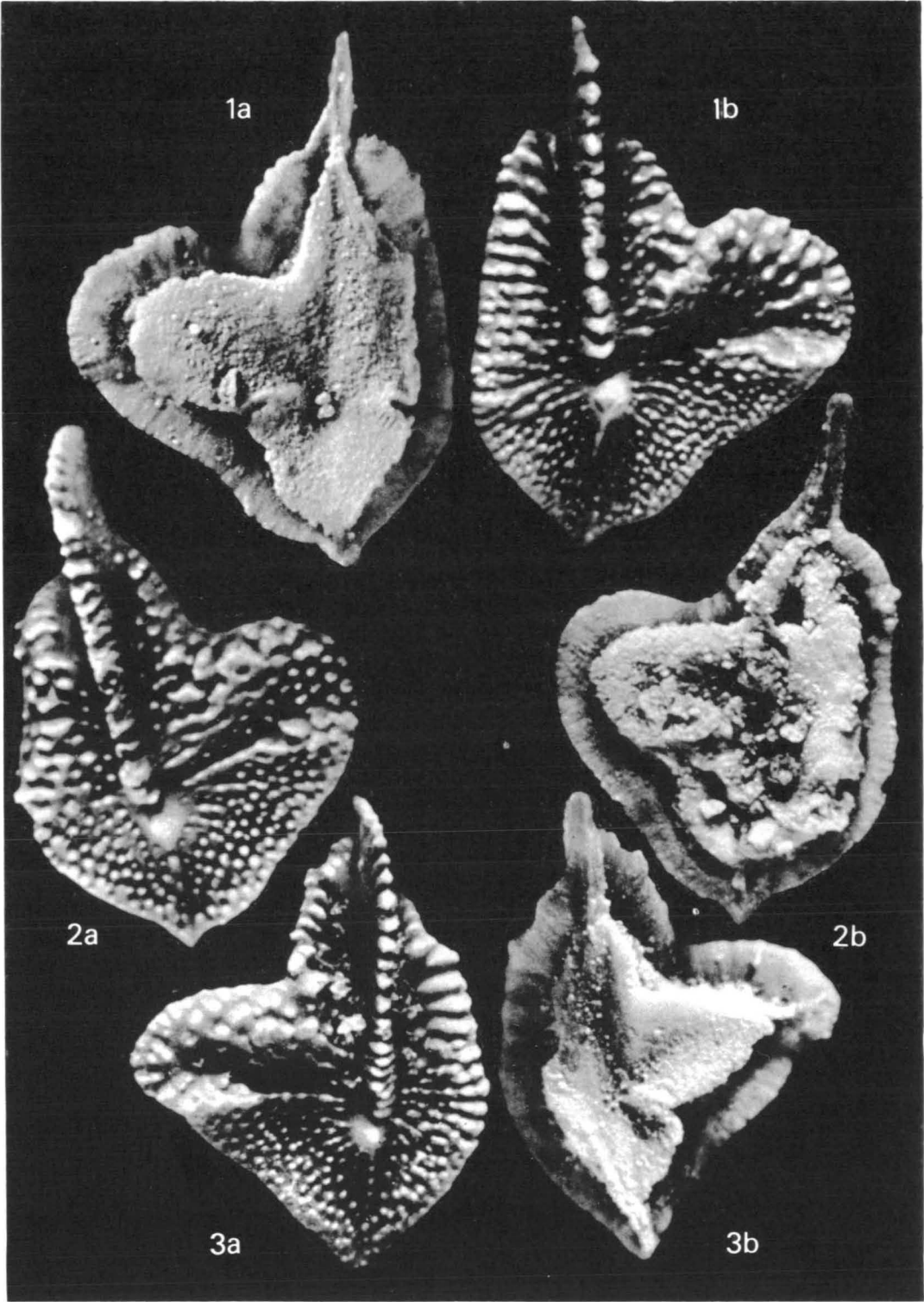


PLATE 55

Palmatolepis quadrantinodosa marginifera Helms, 1959

p. 165

Fig. 1a, b, c Lateral, oral, and aboral views of specimen CPC 12637.

Fig. 2a, b Aboral and oral views of specimen CPC 12640.

Fig. 3a, b Oral and aboral views of specimen CPC 12638.

Palmatolepis punctata (Hinde, 1879)

p. 164

Fig. 4a, b Oral and aboral views of specimen CPC 12636.

Fig. 5a, b Aboral and oral views of specimen CPC 12634.

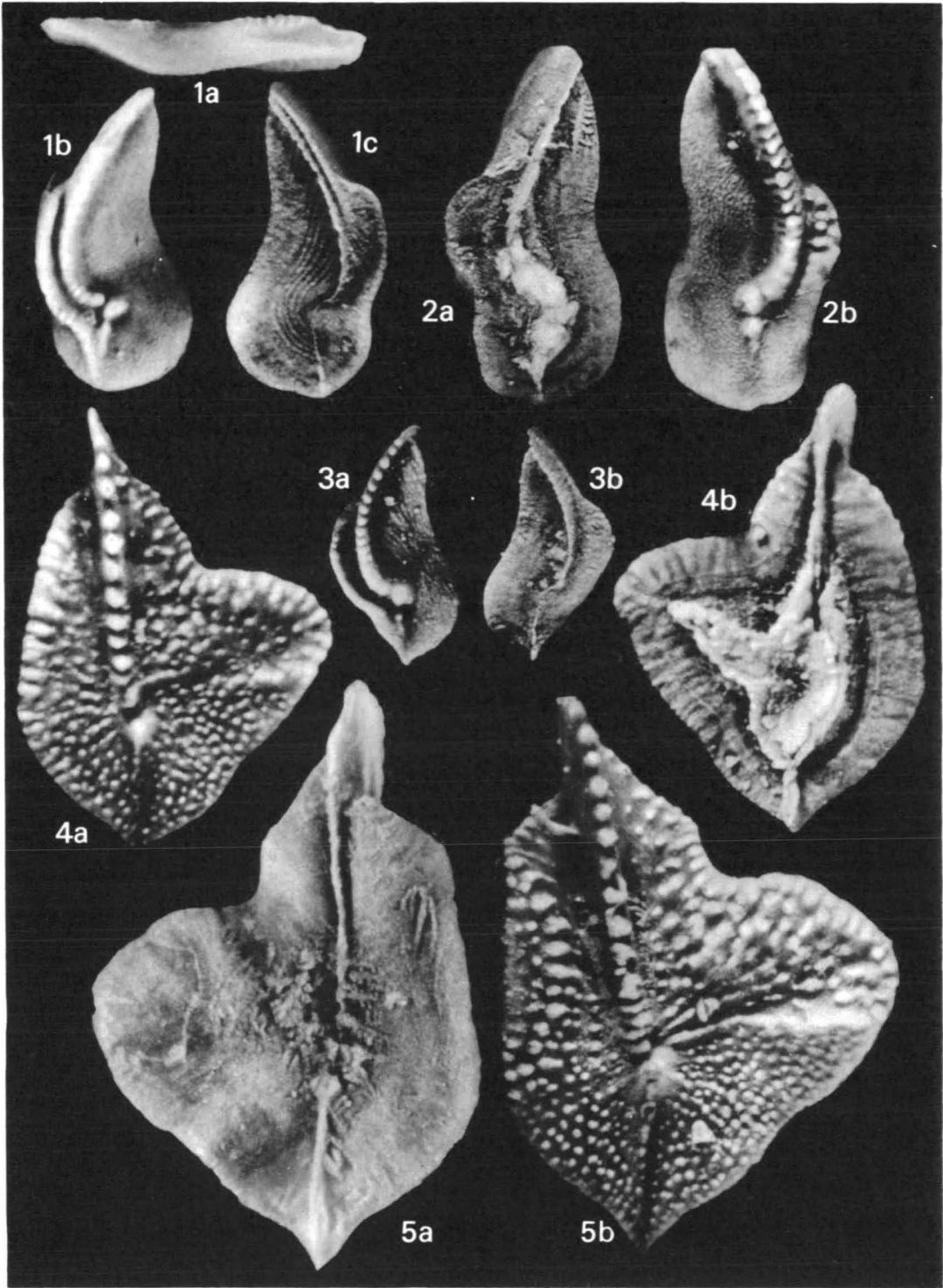


PLATE 56

Palmatolepis quadrantinodosalobata Sannemann, 1955

p. 166

Fig. 1a, b, c Lateral, oral, and aboral views of specimen CPC 12643.

Fig. 2a, b Aboral and oral views of specimen CPC 12644.

Palmatolepis sp. nov. A

p. 176

Fig. 3a, b, c Aboral, oral, and lateral views of specimen CPC 12650.

Palmatolepis quadrantinodosa inflexoidea Ziegler, 1962

p. 165

Fig. 4a, b, c Oral, aboral, and lateral views of specimen CPC 12641.

Fig. 5a, b Oral and aboral views of specimen CPC 12642.

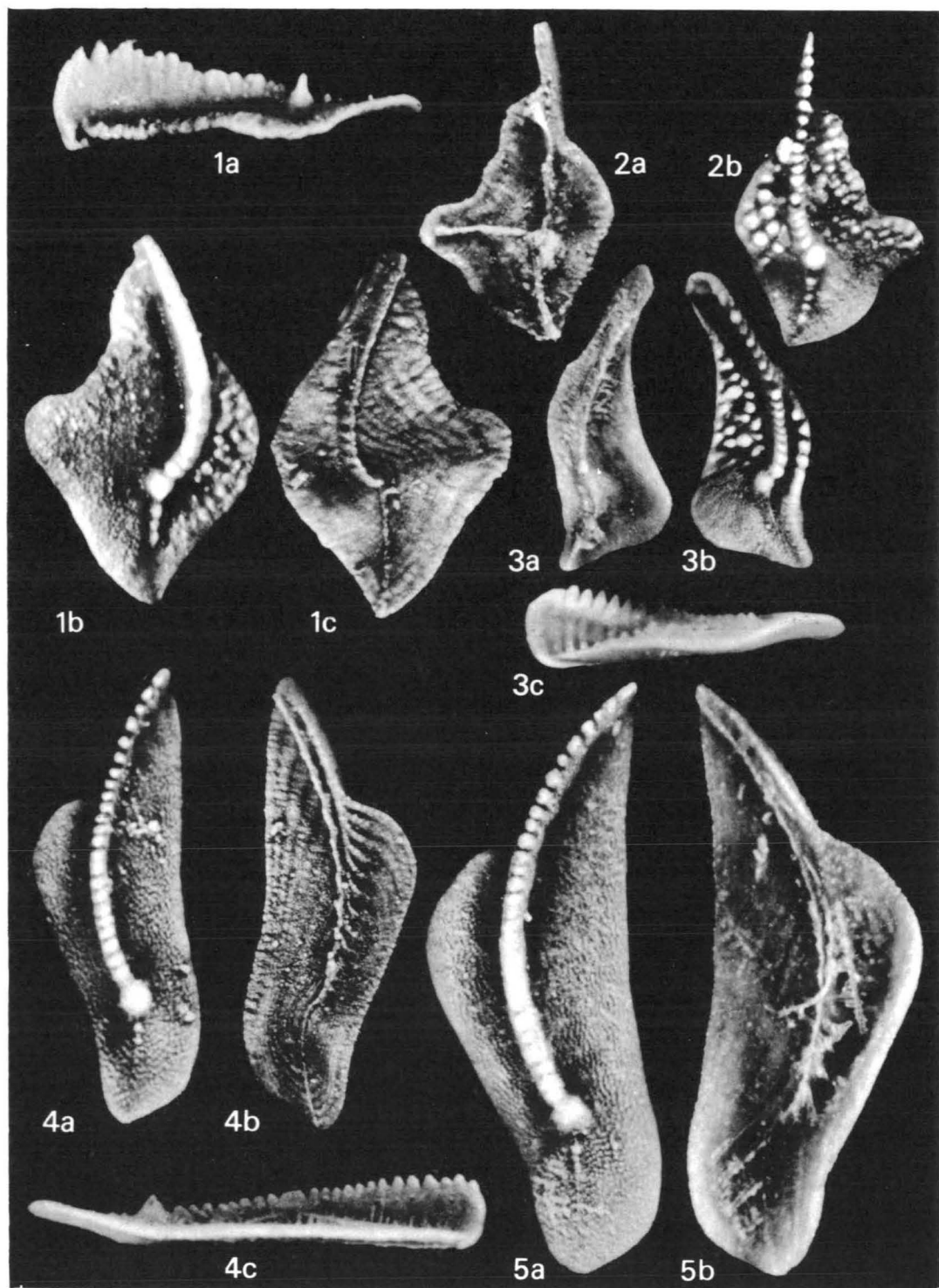


PLATE 57

- Palmatolepis* cf. *P. regularis* Cooper, 1931 p. 167
Fig. 1a, b, c Lateral, oral, and aboral views of specimen CPC 12645.
Fig. 2a, b Aboral and oral views of specimen CPC 12646.
- Palmatolepis rugosa ampla* Müller, 1956 p. 168
Fig. 3a, b, c Oral, aboral, and lateral views of specimen CPC 12648.
- Palmatolepis* cf. *P. subgracilis* Bischoff, 1956 p. 169
Fig. 4a, b Lateral views of specimen CPC 12649.
- Palmatolepis rugosa grossi* Ziegler, 1962 p. 169
Fig. 5a, b, c Aboral, lateral, and oral views of specimen CPC 12647.

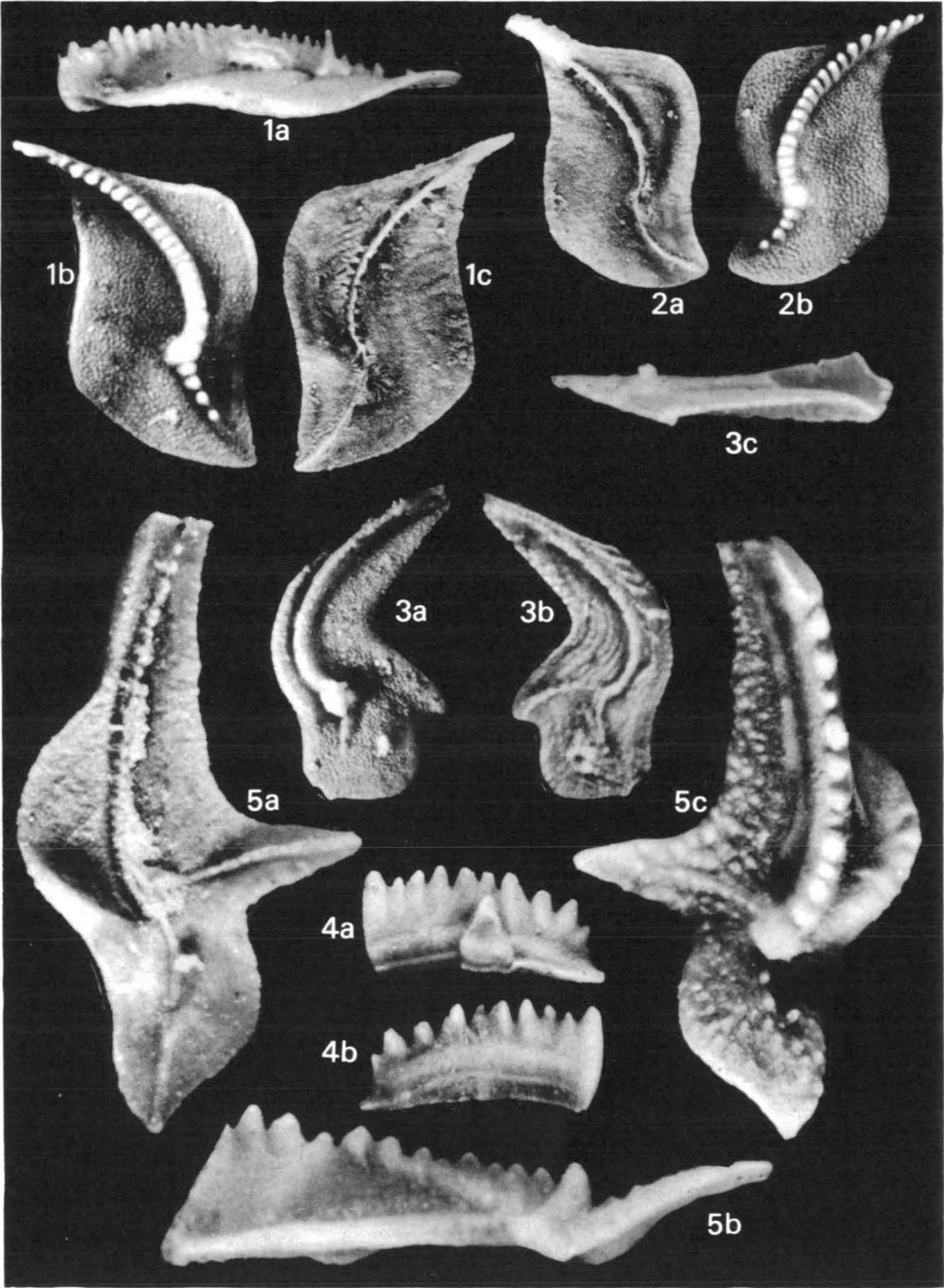


PLATE 58

Palmatolepis subperlobata Branson & Mehl, 1934

p. 170

Fig. 1a, b, c Lateral, aboral, and oral views of specimen CPC 12651.

Fig. 4a, b Oral and aboral views of specimen CPC 12654.

Palmatolepis subperlobata subsp. a Helms, 1963

p. 171

Fig. 2a, b, c Lateral, oral, and aboral views of specimen CPC 12655.

Fig. 3a, b Oral and aboral views of specimen CPC 12657.

Fig. 5a, b Oral and aboral views of specimen CPC 12656.

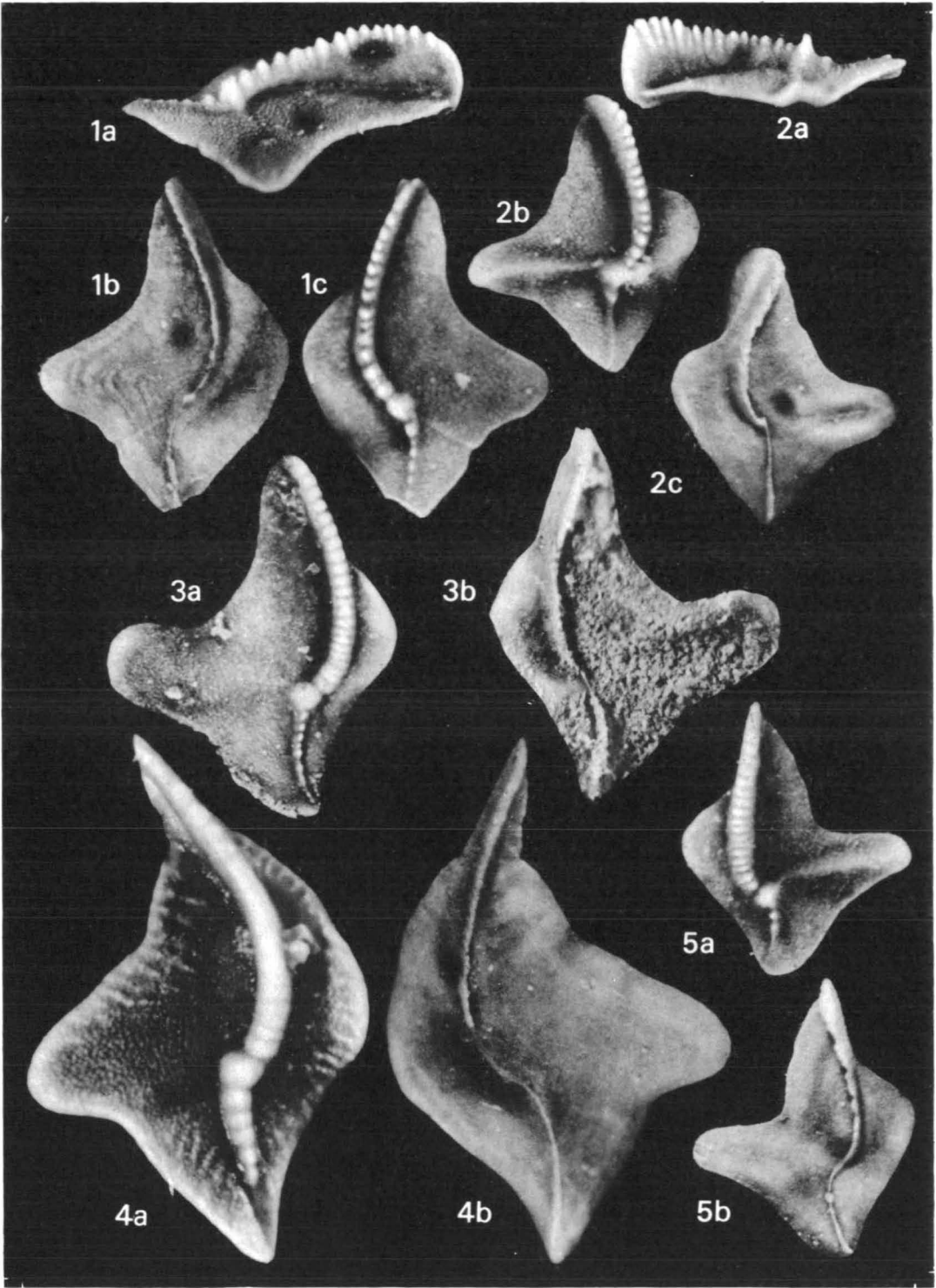


PLATE 59

Palmatolepis subrecta Miller & Youngquist, 1947

p. 171

Fig. 1a, b, c Lateral, aboral, and oral views of specimen CPC 12658.

Fig. 2a, b Aboral and oral views of specimen CPC 12659.

Fig. 3a, b Aboral and oral views of specimen CPC 12660.

Fig. 4a, b Aboral and oral views of specimen CPC 12661.

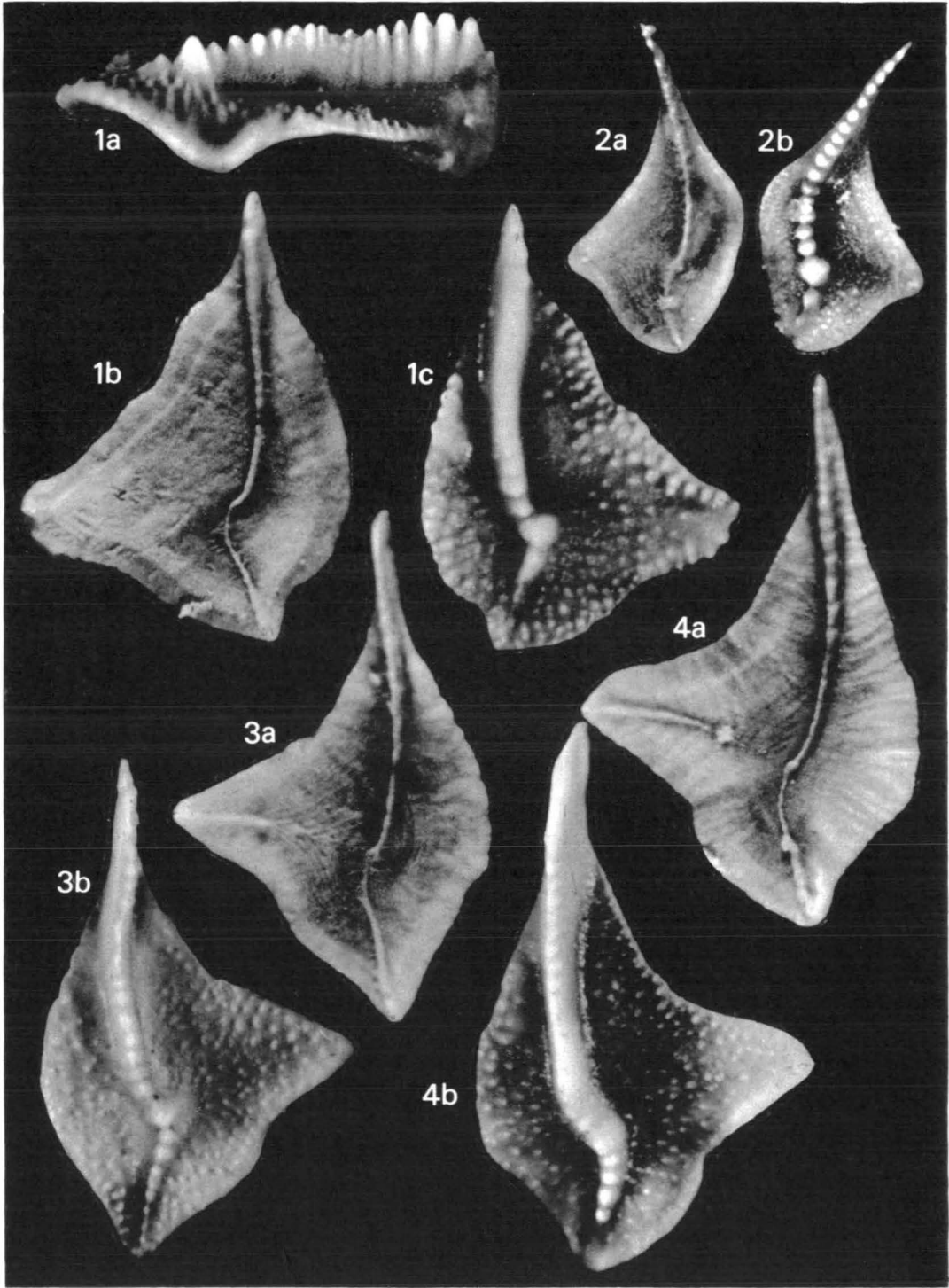


PLATE 60

Palmatolepis tenuipunctata Sannemann, 1955

p. 173

- Fig. 1a, b Oral and aboral views of specimen CPC 12665.
- Fig. 2a, b Oral and aboral views of specimen CPC 12652.
- Fig. 3a, b Oral and aboral views of specimen CPC 12664.
- Fig. 4a, b Oral and aboral views of specimen CPC 12653.

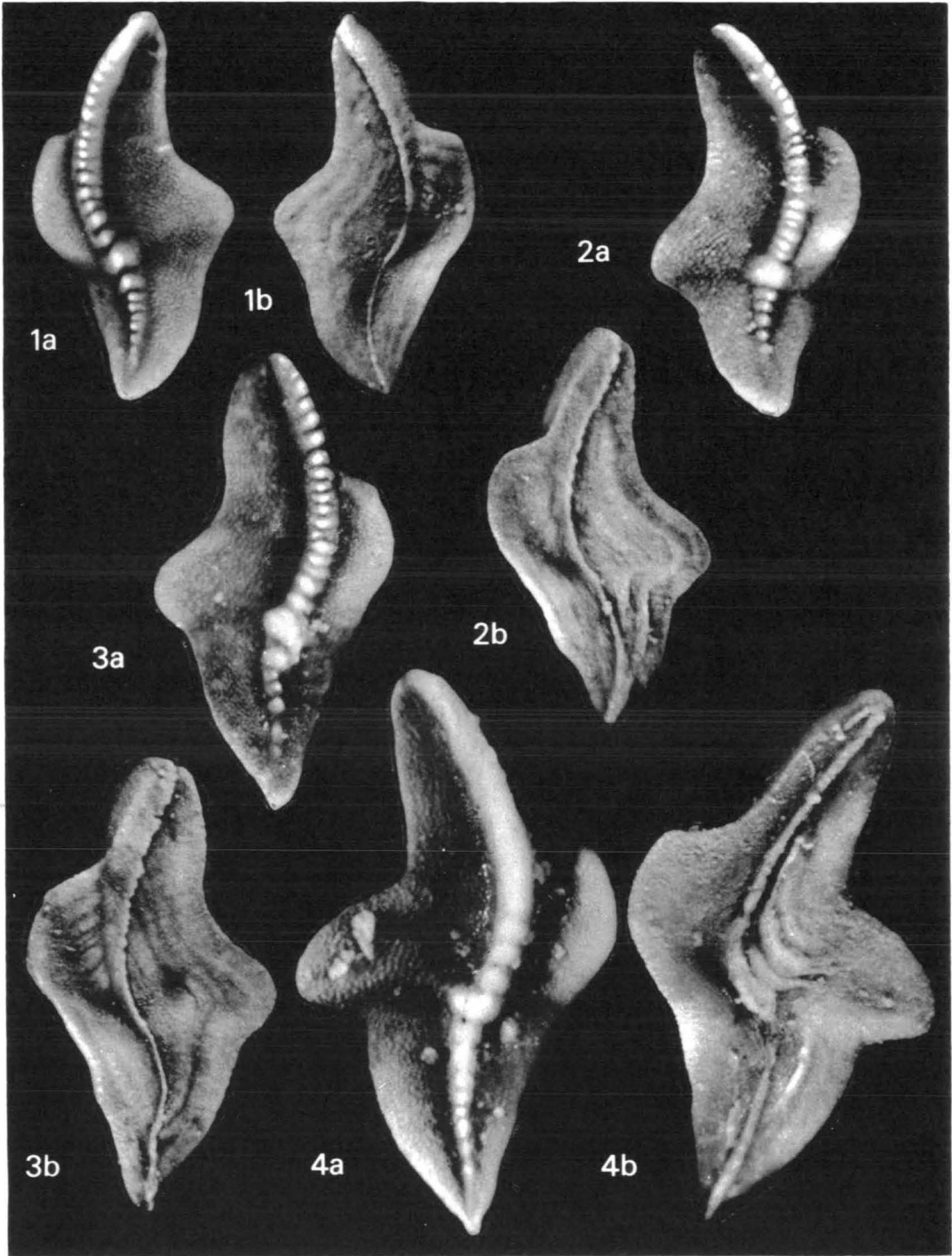


PLATE 61

Palmatolepis triangularis Sannemann, 1955

p. 174

Fig. 1a, b, c Lateral, aboral, and oral views of specimen CPC 12669.

Fig. 2a, b Aboral and oral views of specimen CPC 12670.

Fig. 3a, b Oral and aboral views of specimen CPC 12671.

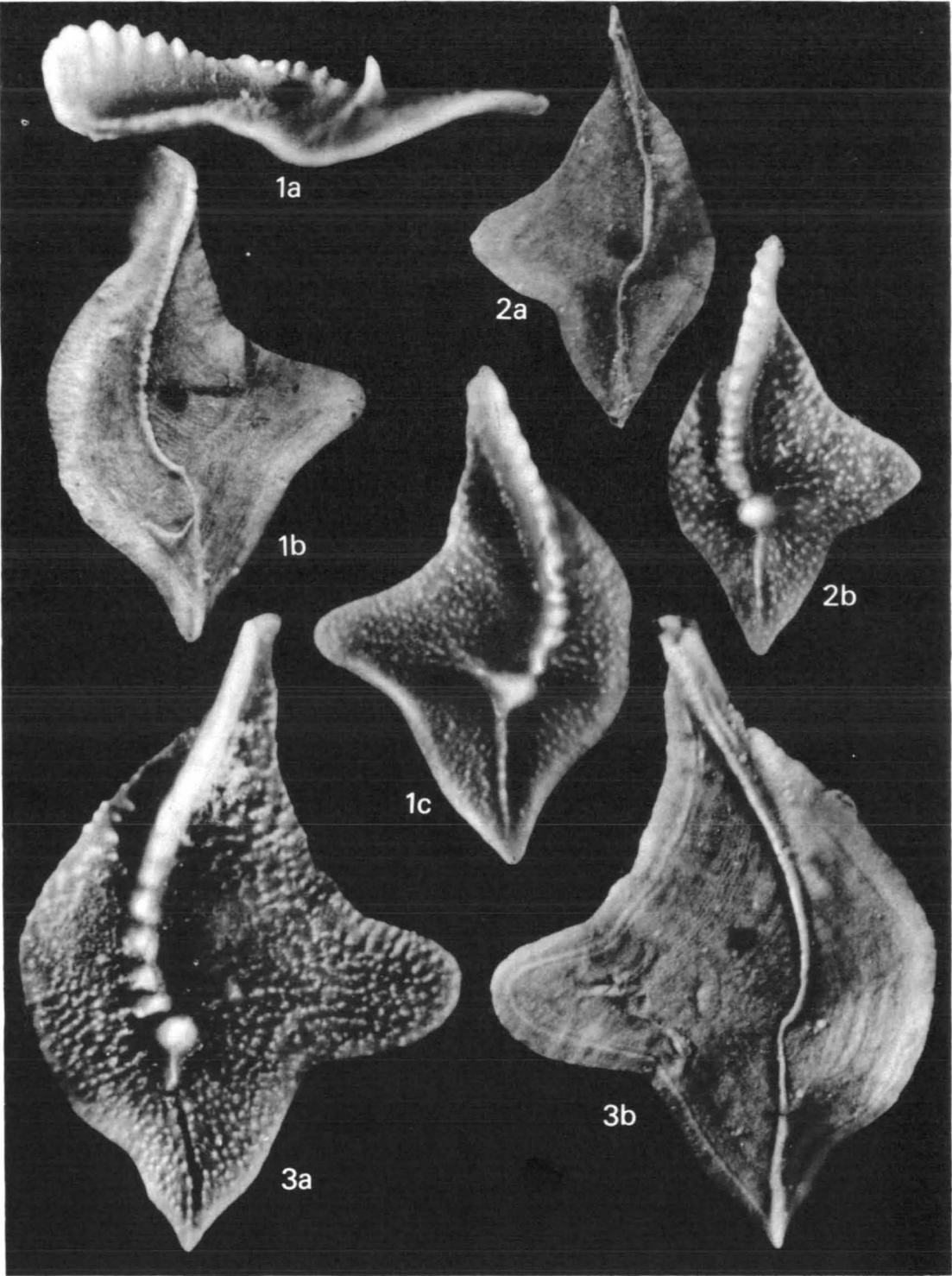


PLATE 62

Palmatolepis unicornis Miller & Youngquist, 1947

p. 175

Fig. 1a, b Aboral and oral views of specimen CPC 12672.

Fig. 3a, b Oral and aboral views of specimen CPC 12674.

Fig. 4a, b Aboral and oral views of specimen CPC 12673.

Palmatolepis triangularis Sannemann, 1955

p. 174

Fig. 2a, b Oral and aboral views of specimen CPC 12668.

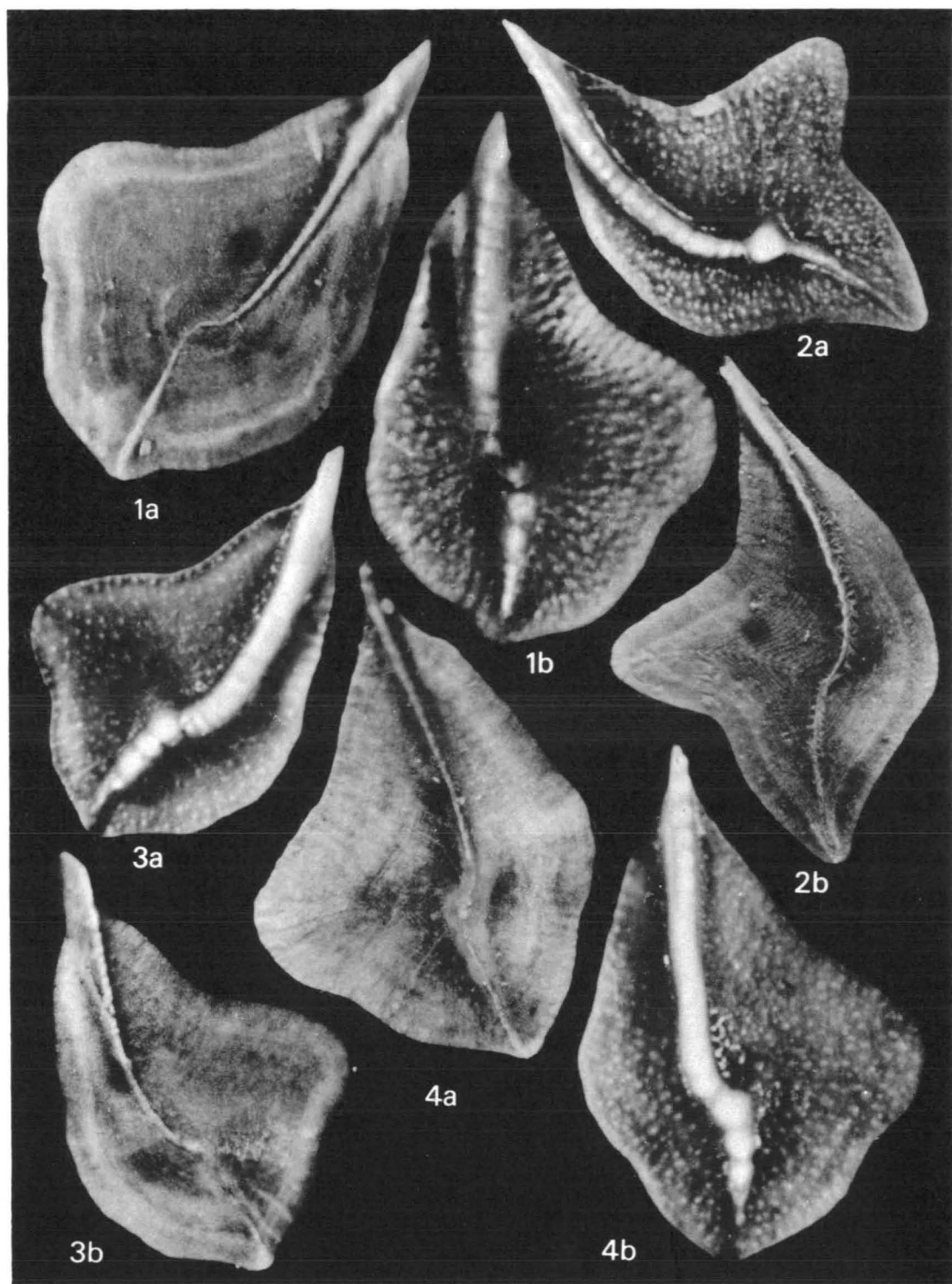


PLATE 63

Palmatolepis transitans Müller, 1956

p. 173

Fig. 1a, b, c Lateral, oral, and aboral views of specimen CPC 12666.

Fig. 2a, b Aboral and oral views of specimen CPC 12667.

Palmatolepis subperlobata Branson & Mehl, 1934

p. 170

Fig. 3a, b Aboral and oral views of specimen CPC 12663.

Fig. 4a, b Oral and aboral views of specimen CPC 12662.

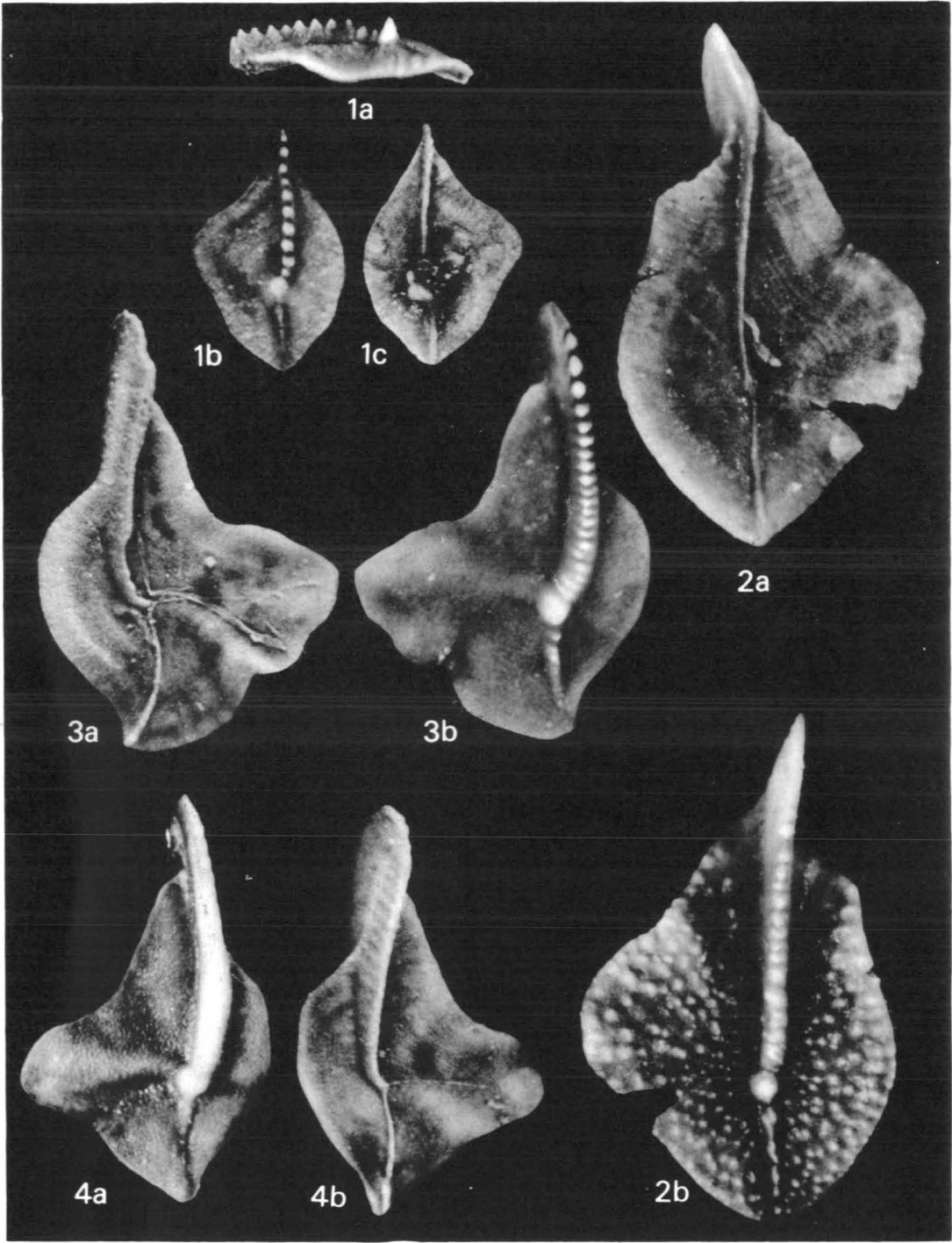


PLATE 64

Palmatolepis glabra pectinata Ziegler, 1962 p. 156

Fig. 1a, b Oral and aboral views of specimen CPC 12639.

Palmatolepis gracilis gracilis Branson & Mehl, 1934 p. 157

Fig. 2a, b Oral and aboral views of specimen CPC 12611.

Fig. 3a, b Oral and aboral views of specimen CPC 12610.

Fig. 4a, b, c Oral, aboral, and lateral views of specimen CPC 12609 (fig. 4c incorrectly labelled 5c).

Palmatolepis cf. *P. gigas* Miller & Youngquist, 1947 p. 152 .

Fig. 5a, b Aboral and oral views of specimen CPC 12614.

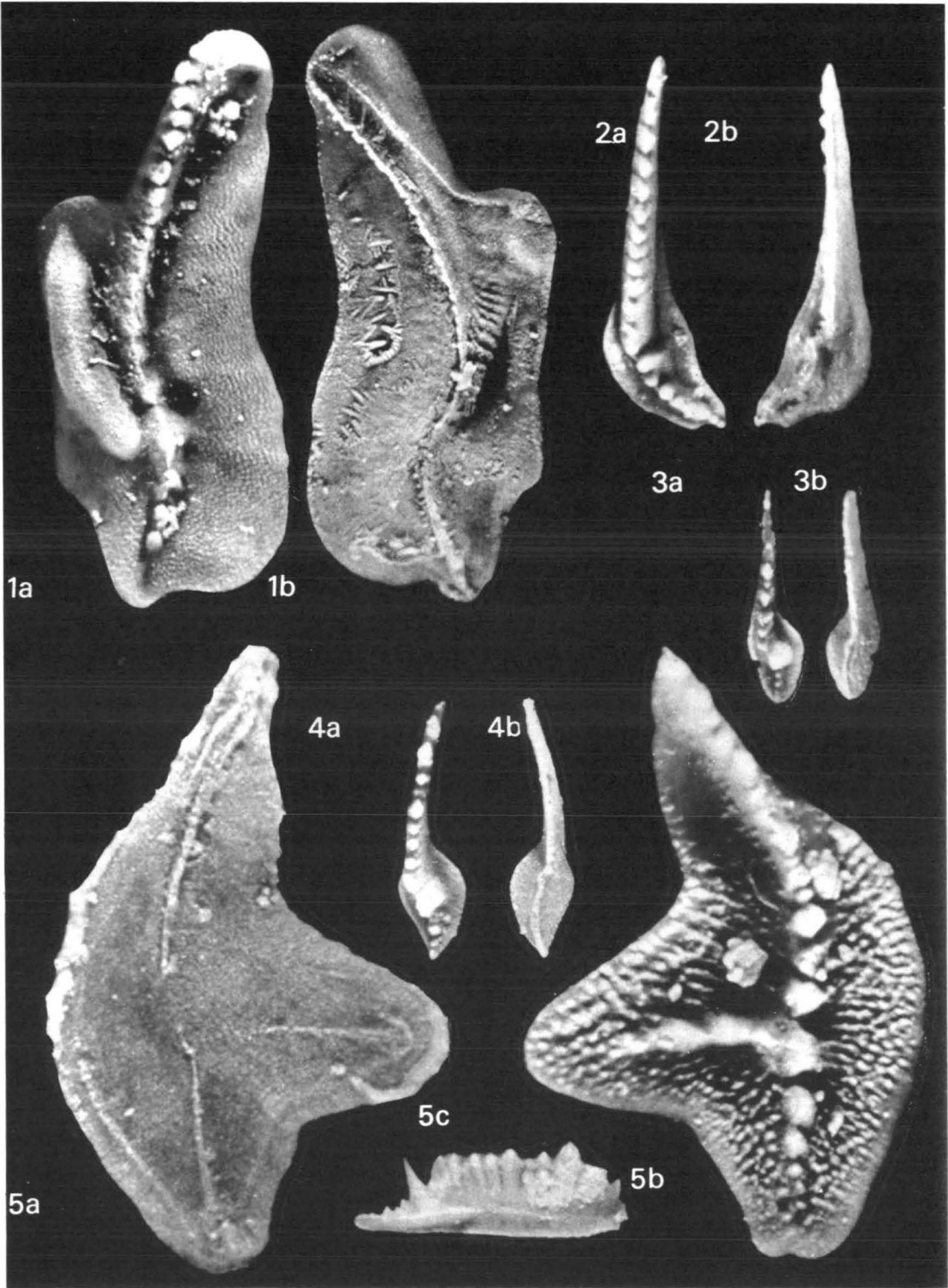


PLATE 65

- Palmatolepis gigas* Miller & Youngquist, 1947 p. 151
Fig. 1a, b, c Lateral, oral, and aboral views of specimen CPC 12612.
Fig. 2a, b Aboral and oral views of specimen CPC 12615 (same specimens as pl. 71,
fig. 5a, b)
- Palmatolepis hassi* Müller & Müller, 1957 p. 158
Fig. 3a, b Lateral and oral views of specimen CPC 12616.
Fig. 4a, b Aboral and oral views of specimen CPC 12617.
Fig. 5a, b Aboral and oral views of specimen CPC 12618.
- Palmatolepis linguiformis* Müller, 1956 p. 158
Fig. 6a, b Oral and aboral views of specimen CPC 12619.

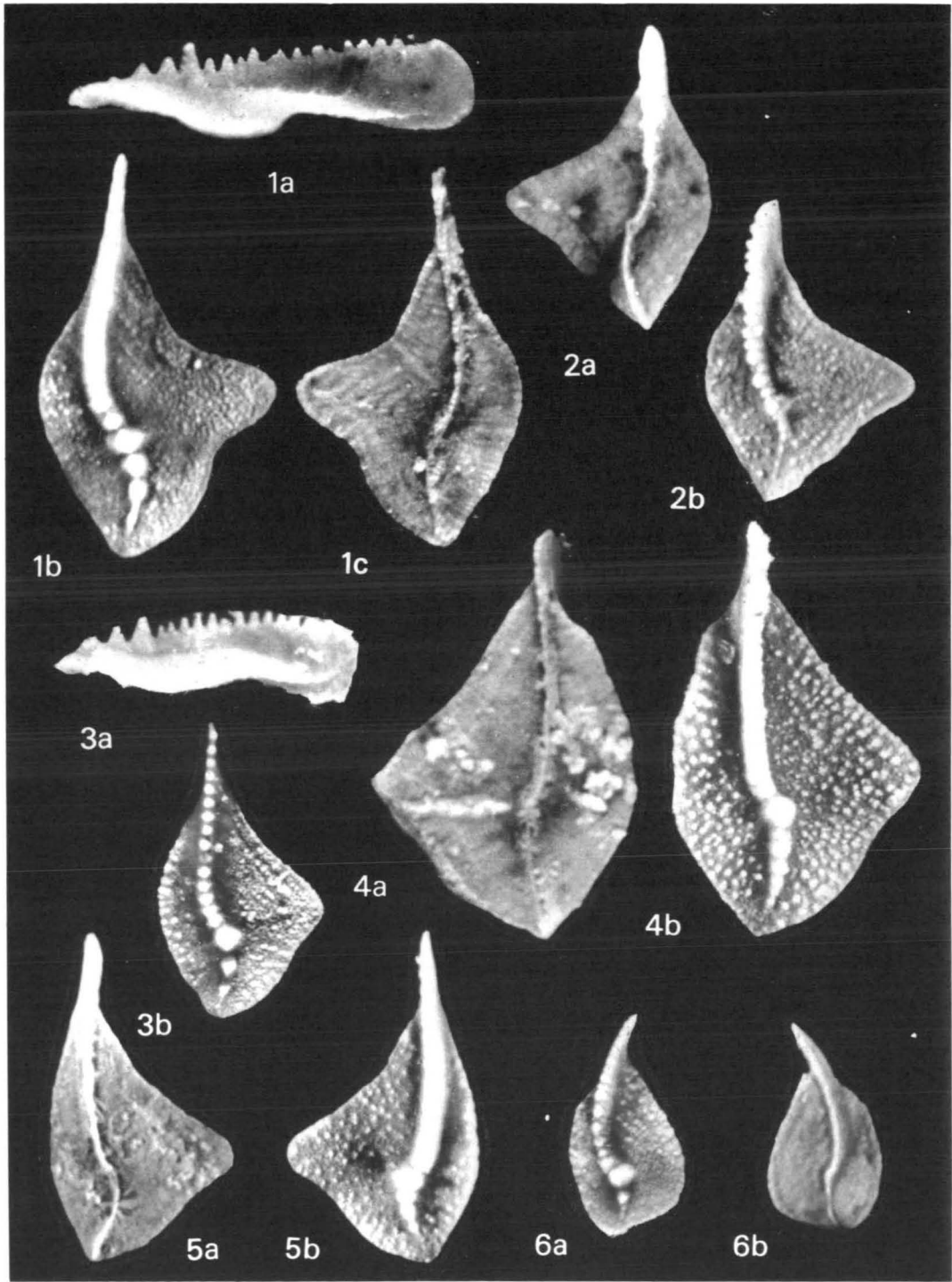


PLATE 66

Palmatolepis minuta minuta Branson & Mehl, 1934

p. 159

Fig. 1a, b Lateral and oral views of specimen CPC 12620.

Fig. 2a, b Aboral and oral views of specimen CPC 12621.

Fig. 3a, b Oral and aboral views of specimen CPC 12622.

Palmatolepis minuta loba Helms, 1963

p. 160

Fig. 4a, b Aboral and oral views of specimen CPC 12624.

Fig. 6a, b Oral and lateral views of specimen CPC 12623.

Palmatolepis minuta schleizia Helms, 1963

p. 161

Fig. 5 Oral view of specimen CPC 12625.

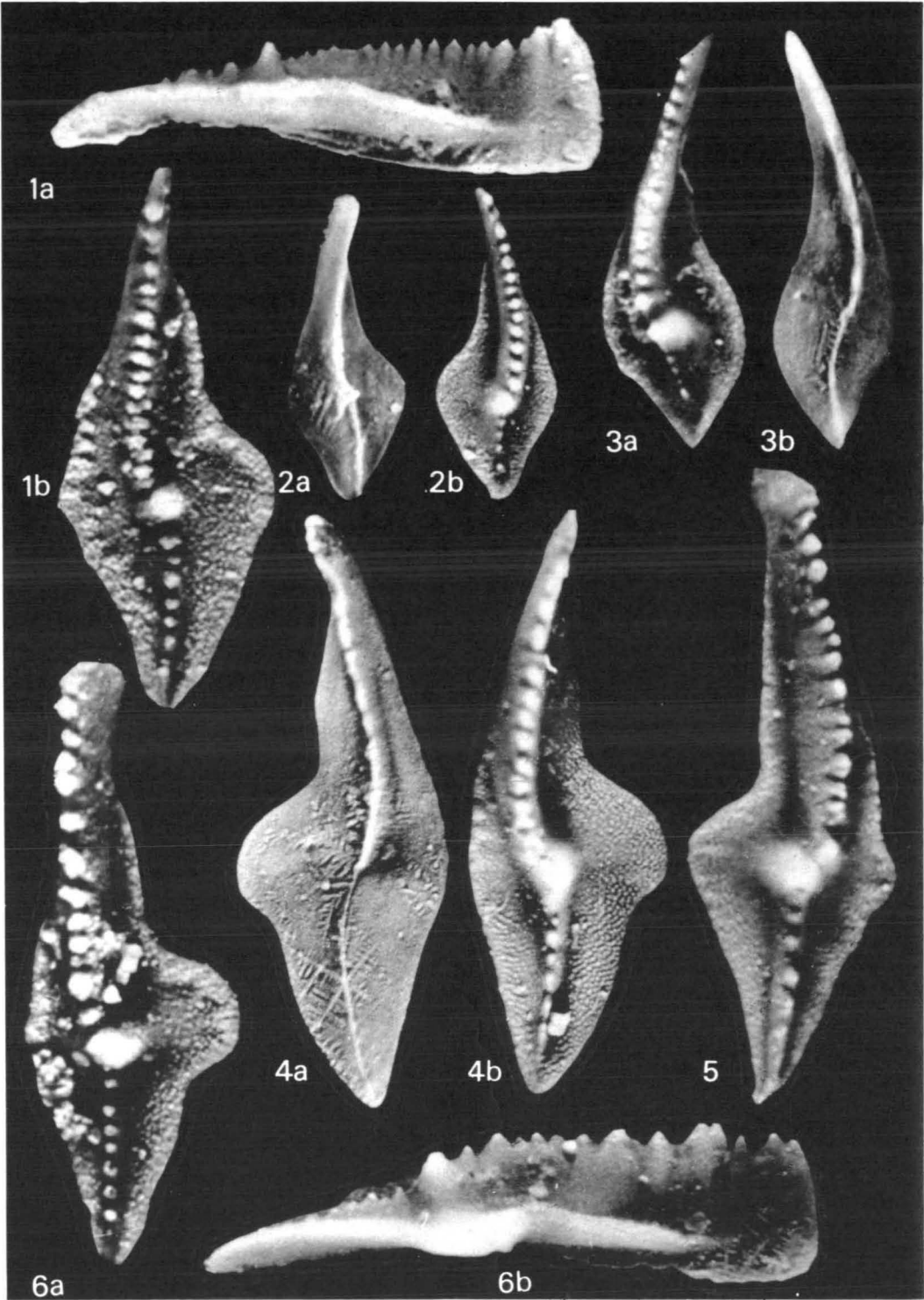


PLATE 67

Palmatolepis minuta schleizia Helms, 1963

p. 161

Fig. 1a, b Oral and aboral views of specimen CPC 12626.

Palmatolepis perlobata perlobata Ulrich & Bassler, 1926

p. 161

Fig. 2a, b Lateral and oral views of specimen CPC 12627.

Fig. 3a, b Oral and aboral view of specimen CPC 12628.

Fig. 4a, b Oral and aboral views of specimen CPC 12630.

Fig. 5a, b Aboral and oral views of specimen CPC 12629. Aboral surface bears "basal bone".

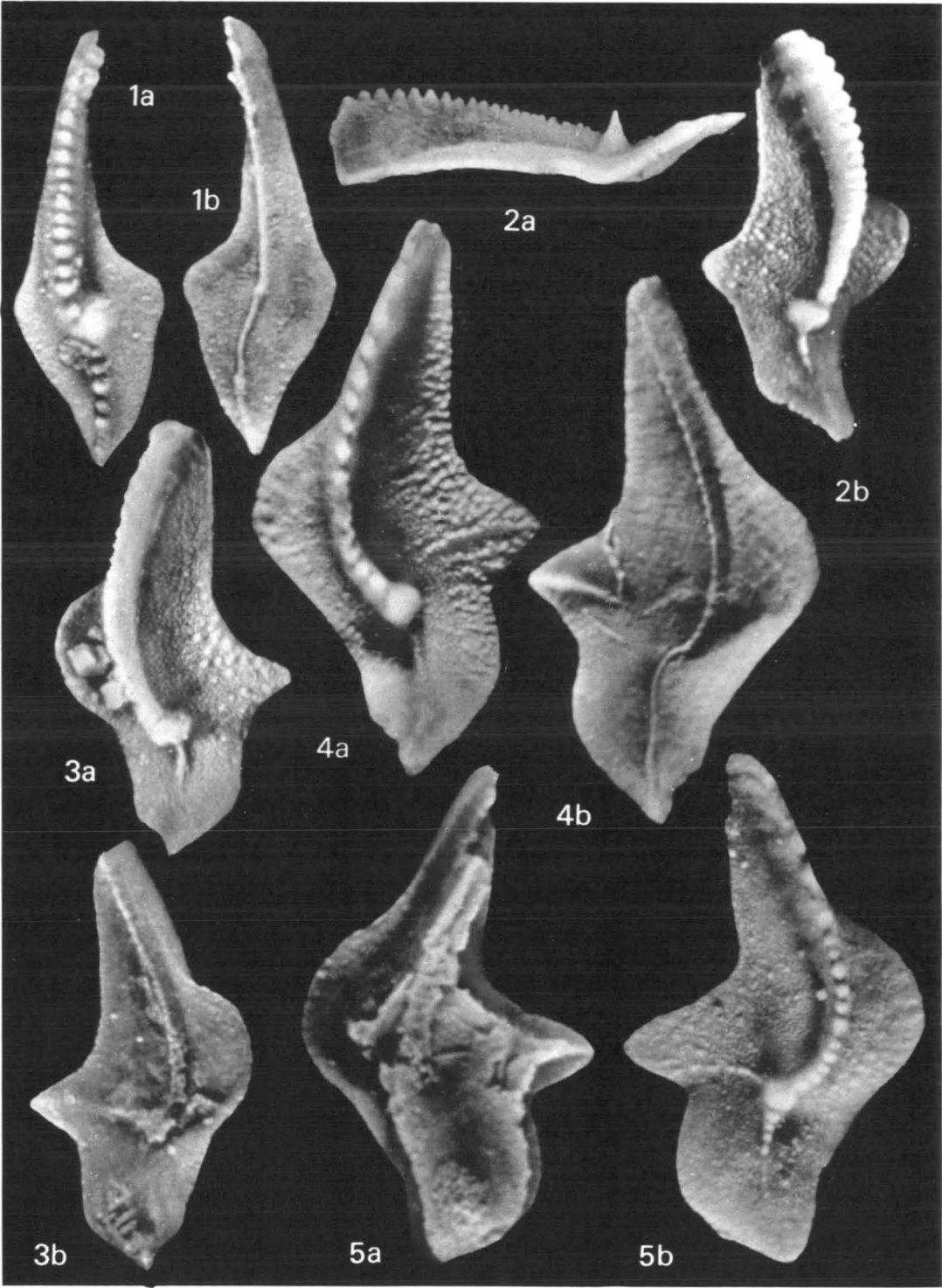


PLATE 68

- Polygnathus asymmetricus asymmetricus* Bischoff & Ziegler, 1957 p. 180
Fig. 1a, b, c Lateral, aboral, and oral views of specimen CPC 12679.
- Polygnathus asymmetricus ovalis* Ziegler & Klapper, 1964 p. 180
Fig. 2a, b Oral and aboral views of specimen CPC 12683.
Fig. 3a, b, c Lateral, aboral, and oral views of specimen CPC 12680.
- Polygnathus australis* sp. nov. p. 181
Fig. 4a, b Aboral and oral views of paratype CPC 12684.
- Palmatolepis perlobata sigmoidea* Ziegler, 1962 p. 163
Fig. 5a, b, c Aboral, oral, and lateral views of specimen CPC 12631.

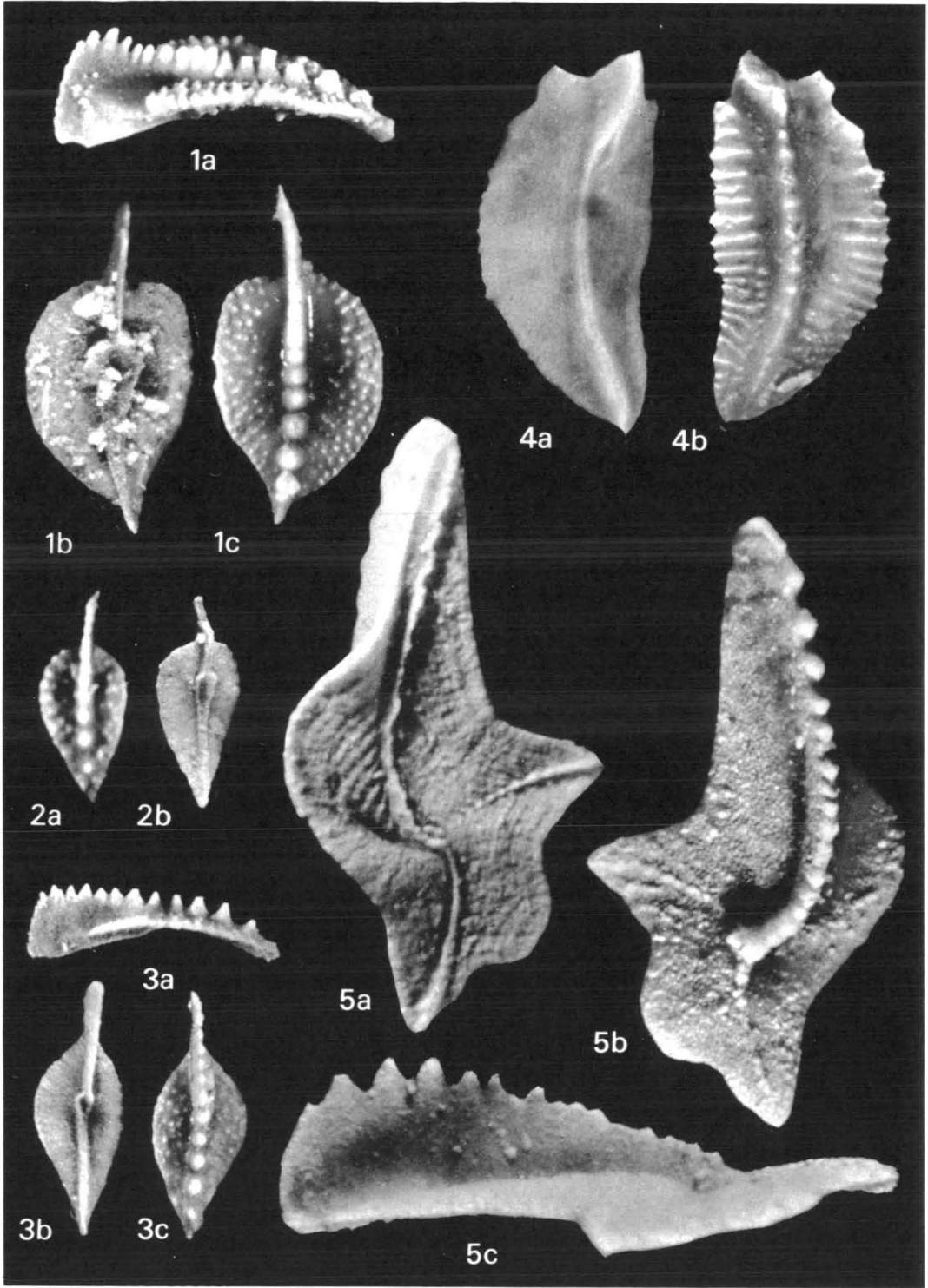


PLATE 69

Polygnathus asymmetricus asymmetricus Bischoff & Ziegler, 1957

p. 180

Fig. 1a, b, c Lateral, aboral, and oral views of specimen CPC 12676.

Fig. 2a, b Oral and aboral views of specimen CPC 12678.

Fig. 3a, b Oral and aboral views of specimen CPC 12677.

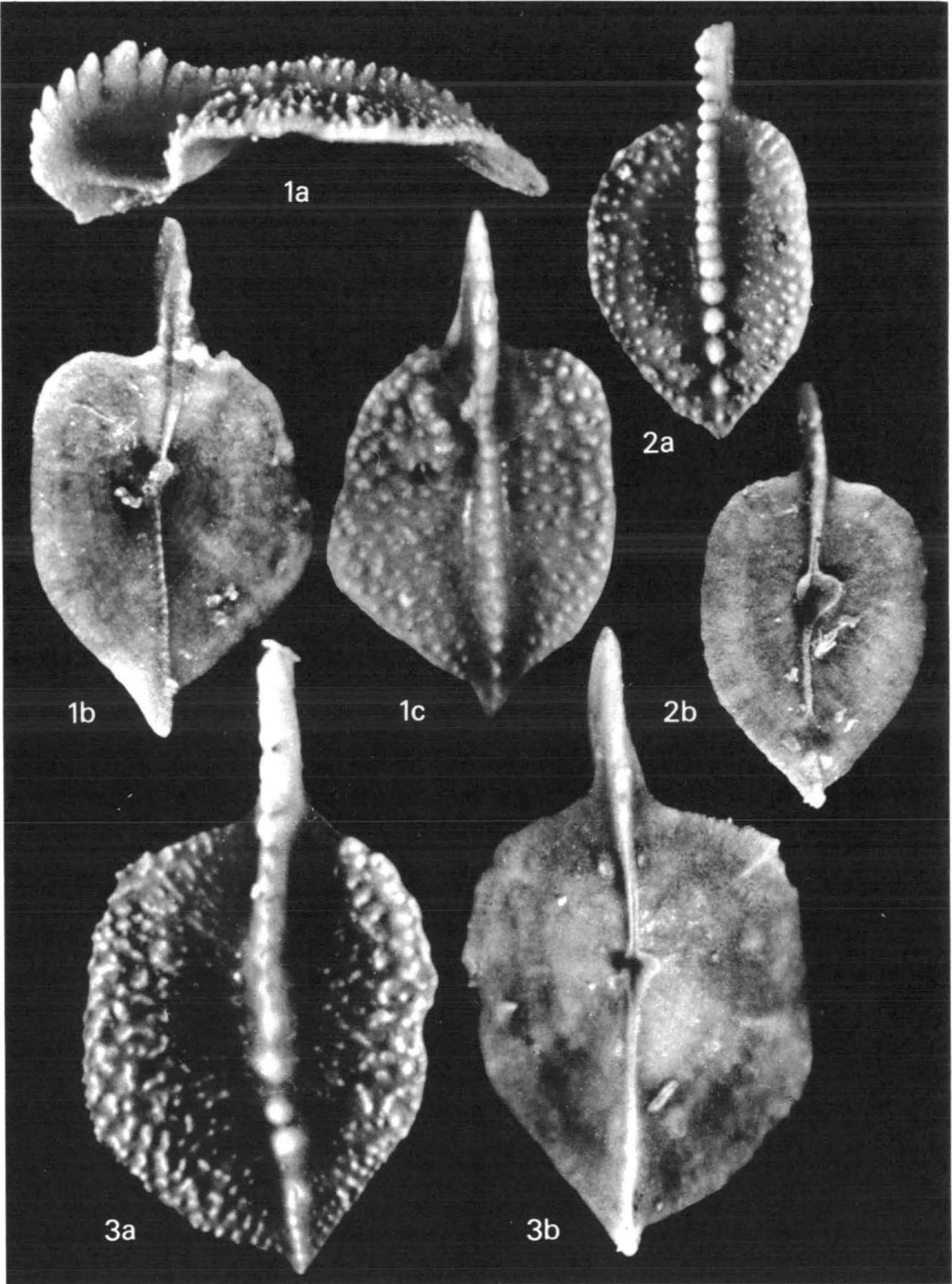


PLATE 70

Polygnathus australis sp. nov.

p. 181

Fig. 1a, b Aboral and oral view of paratype CPC 12686. A juvenile form with a less massive platform.

Fig. 2a, b Aboral and oral views of **holotype** CPC 12685.

Polygnathus brevilaminus Branson & Mehl, 1934

p. 183

Fig. 3a, b Aboral and oral views of specimen CPC 12688.

Fig. 4a, b Aboral and oral views of specimen CPC 12689.

Fig. 5a, b, c Lateral, oral, and aboral views of specimen CPC 12687.

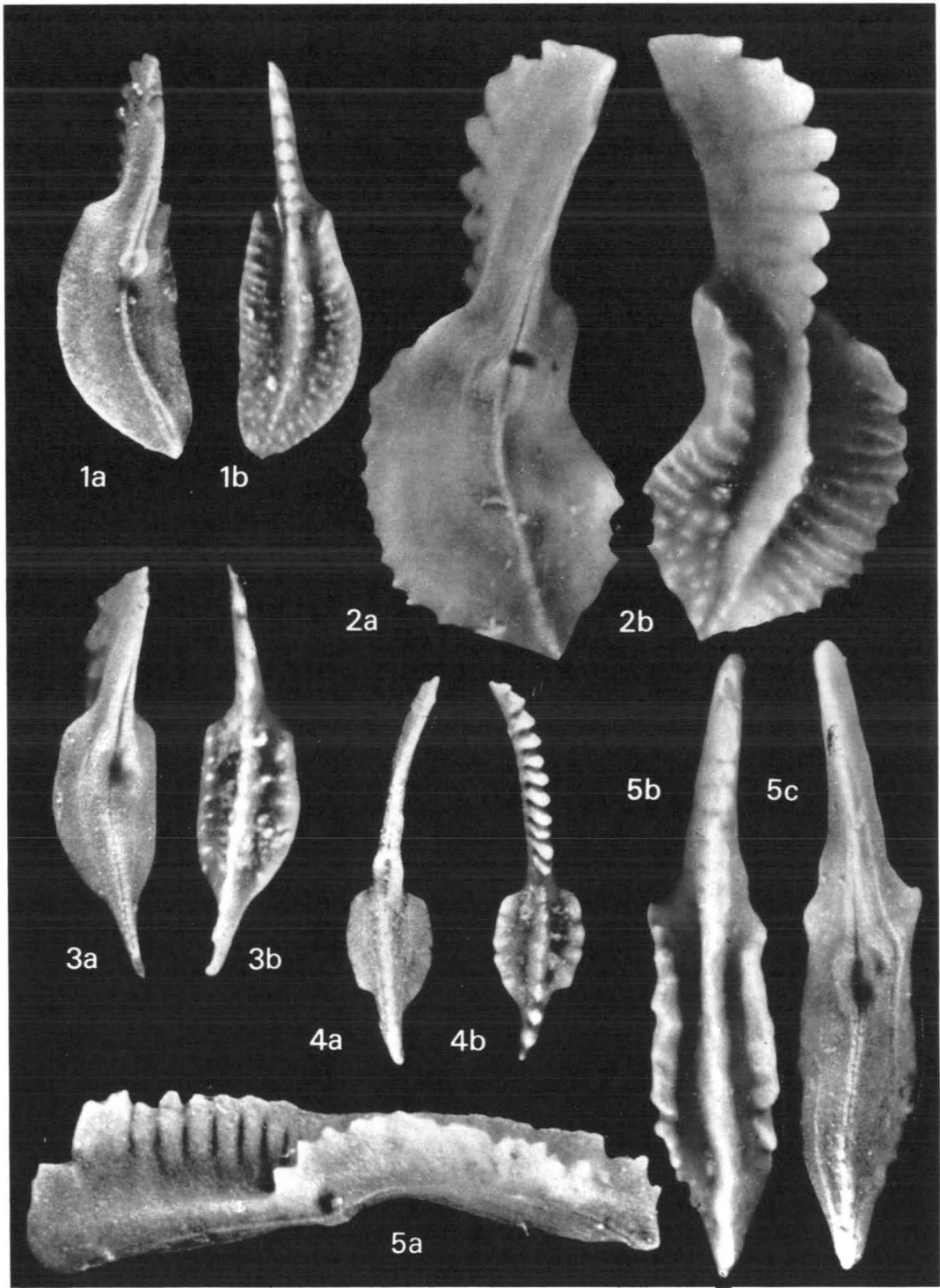


PLATE 71

- Polygnathus collinsoni* Druce, 1969 p. 184
Fig. 1a, b, c Lateral, aboral, and oral views of specimen CPC 12690.
Fig. 2a, b Oral and aboral views of specimen CPC 12691.
- Polygnathus decorosus* Stauffer, 1938 p. 184
Fig. 3a, b Aboral and oral views of specimen CPC 12693.
Fig. 4a, b Aboral and oral views of specimen CPC 12694.
Fig. 6a, b Aboral and oral views of specimen CPC 12692.
- Palmatolepis gigas* Miller & Youngquist, 1947 p. 151
Fig. 5a, b Oral and aboral views of specimen CPC 12615.
- Scaphignathus* cf. *S. zieglerei* Druce, 1969 p. 209
Fig. 7 Oral view of specimen CPC 12777.
- Ancyrodella rotundiloba rotundiloba* (Bryant, 1921) p. 62
Fig. 8 Oral view of specimen CPC 12390.

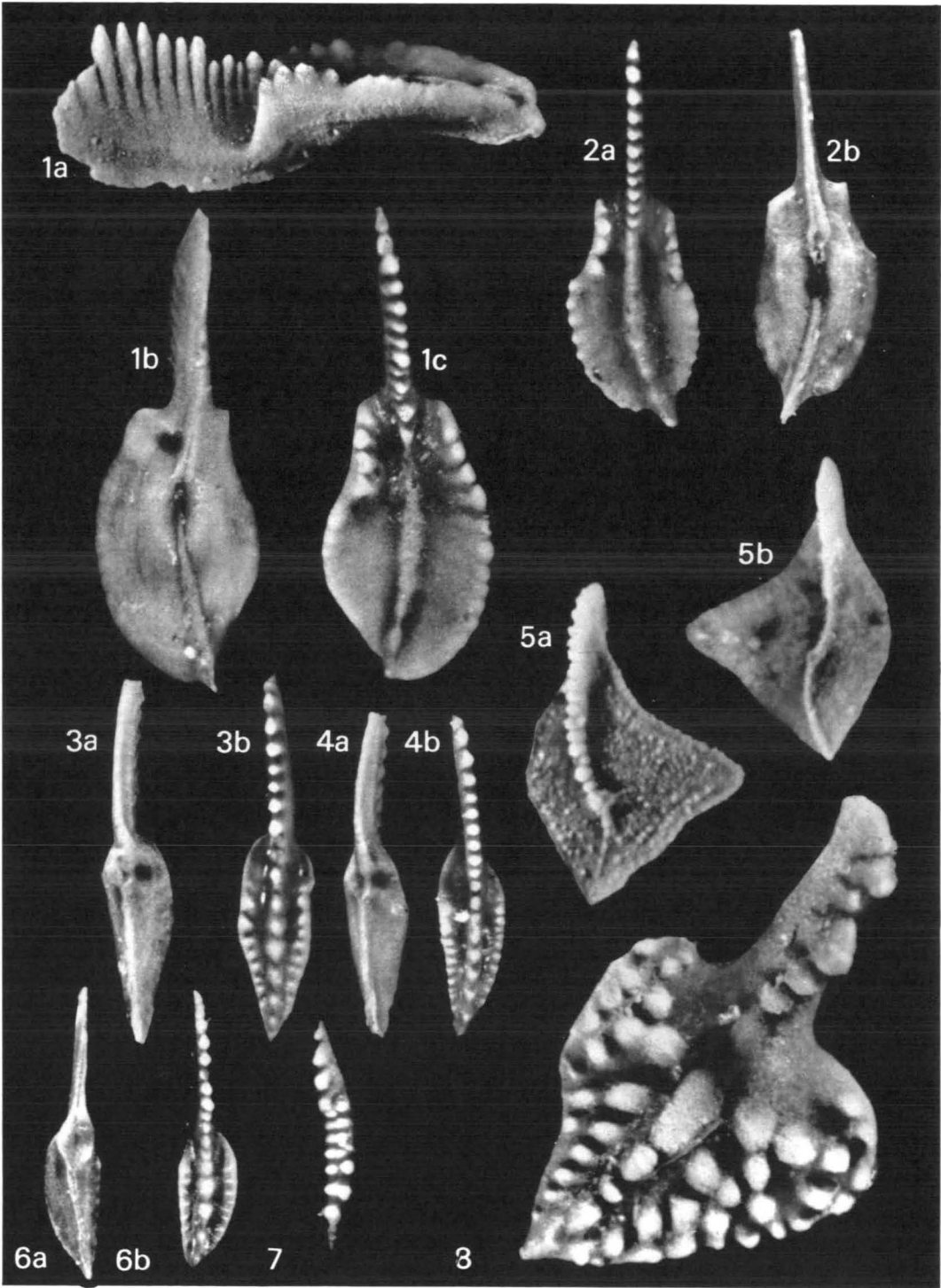


PLATE 72

- Polygnathus delicatulus* Ulrich & Bassler, 1926 p. 185
- Fig. 1a, b, c Lateral, aboral, and oral views of specimen CPC 12695.
- Fig. 2a, b Oral and aboral views of specimen CPC 12697. A more nodose juvenile specimen.
- Fig. 3a, b Aboral and oral views of specimen CPC 12696.
- Polygnathus fallax* Helms & Wolska, 1967 p. 186
- Fig. 4a, b Aboral and oral views of specimen CPC 12699.
- Fig. 5a, b, c Lateral, oral, and aboral views of specimen CPC 12698.

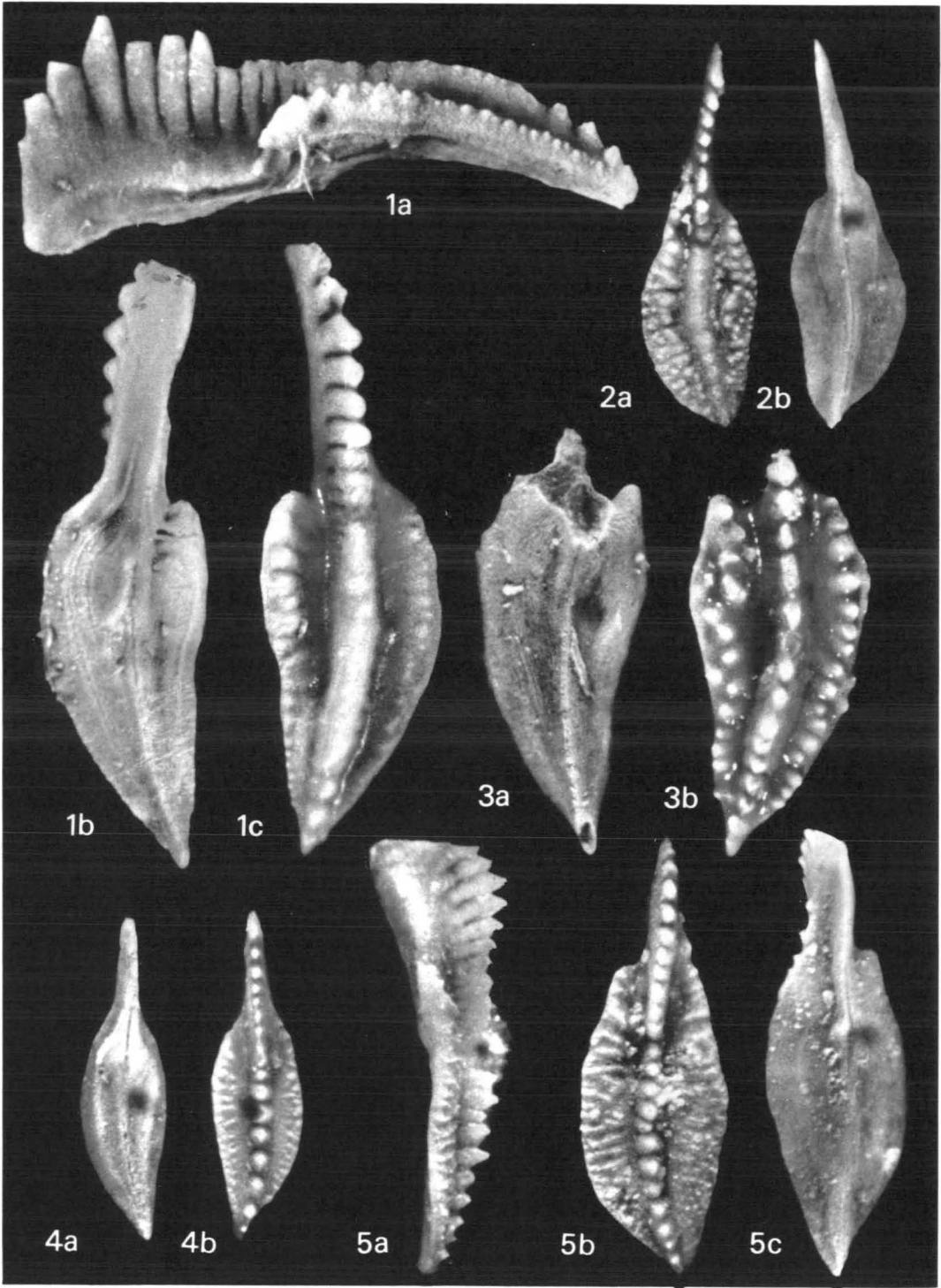


PLATE 73

- Polygnathus* cf. *P. foliatus* Bryant, 1921 p. 187
Fig. 1a, b Oral and aboral views of specimen CPC 12700.
- Polygnathus foliatus* Bryant, 1921 p. 187
Fig. 2a, b, c Lateral, oral, and aboral views of specimen CPC 12702.
Fig. 3a, b Oral and aboral views of specimen CPC 12701.
Fig. 4a, b Aboral and oral views of specimen CPC 12703, showing "basal bone" material.
- Polygnathus germanus* subsp. nov. a p. 189
Fig. 5a, b Aboral and oral views of specimen CPC 12708.
- Polygnathus germanus* subsp. nov. b p. 190
Fig. 6a, b, c Lateral, aboral, and oral views of specimen CPC 12709.

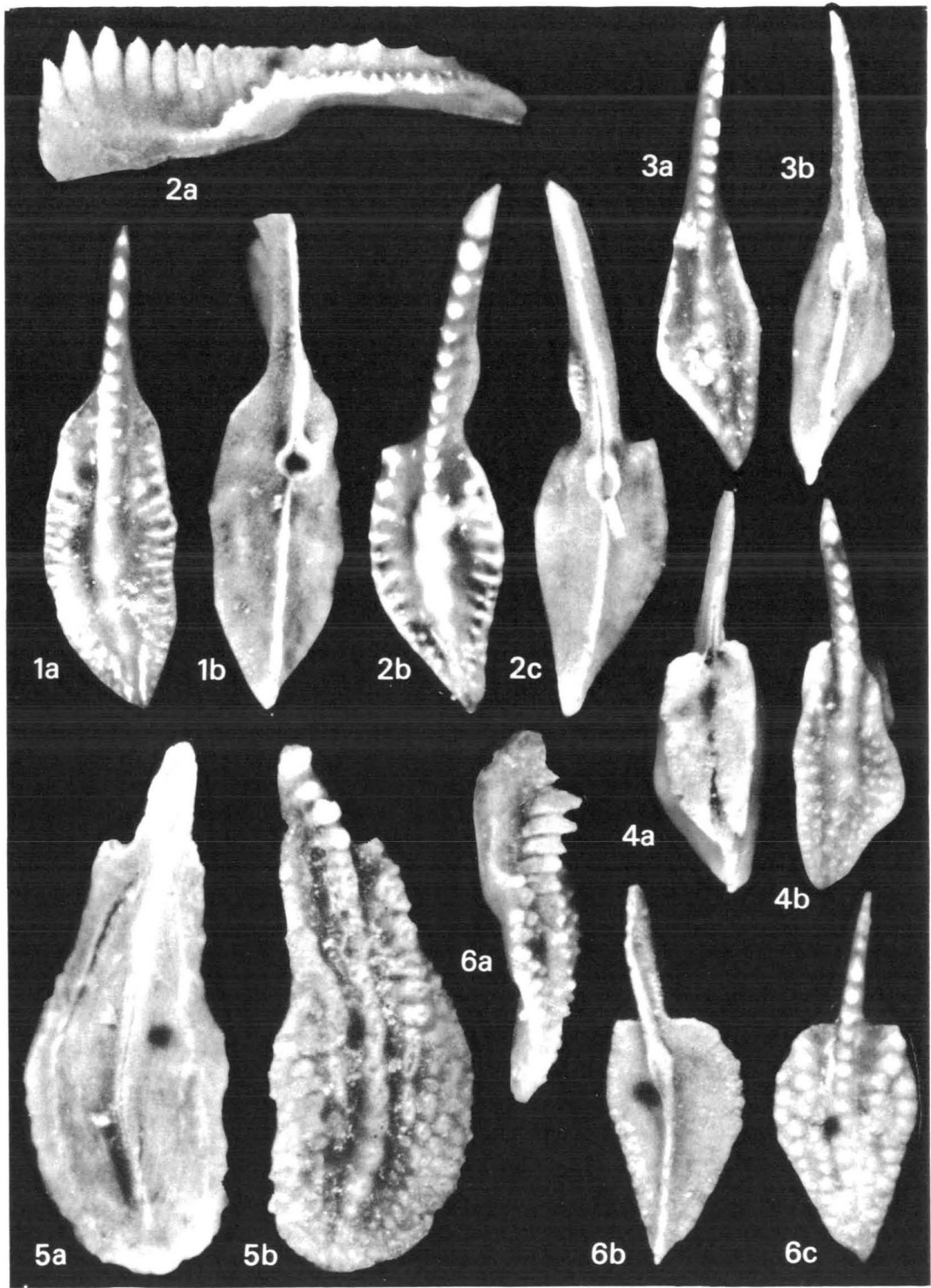


PLATE 74

Polygnathus germanus germanus Ulrich & Bassler, 1926

p. 188

- Fig. 1a, b, c Lateral, oral, and aboral views of specimen CPC 12707.
- Fig. 2a, b Lateral and oral views of specimen CPC 12704.
- Fig. 3a, b Aboral and oral views of specimen CPC 12705.
- Fig. 6a, b Aboral and oral views of specimen CPC 12706.

Polygnathus glaber glaber Ulrich & Bassler, 1926

p. 190

- Fig. 4a, b Aboral and oral views of specimen CPC 12712.
- Fig. 5a, b Oral and aboral views of specimen CPC 12711.

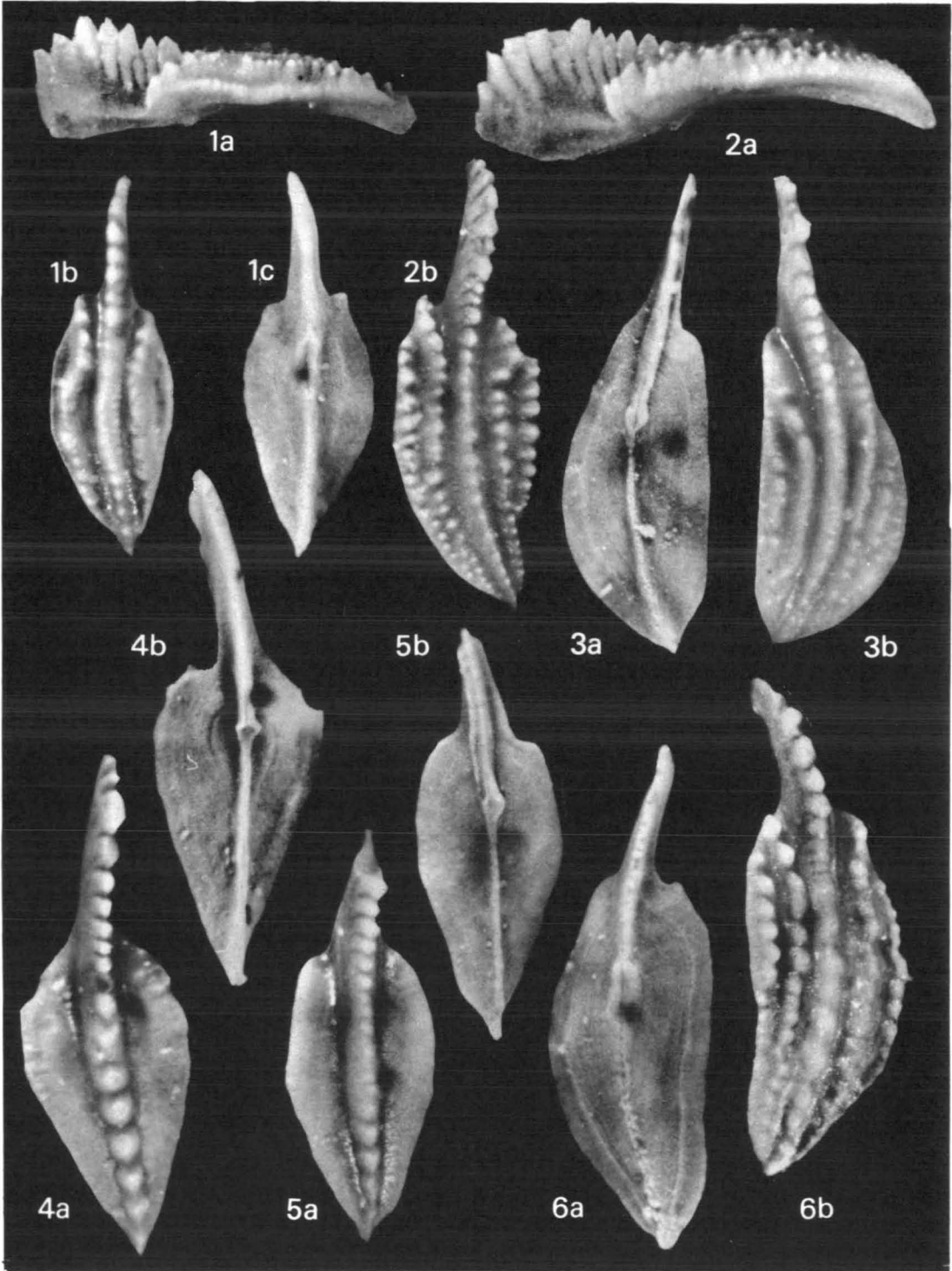


PLATE 75

Polygnathus irregularis (Thomas, 1949)

p. 191

- Fig. 1a, b Aboral and oral views of specimen CPC 12714.
- Fig. 2a, b Aboral and oral views of specimen CPC 12715.
- Fig. 3a, b Aboral and oral views of specimen CPC 12716.

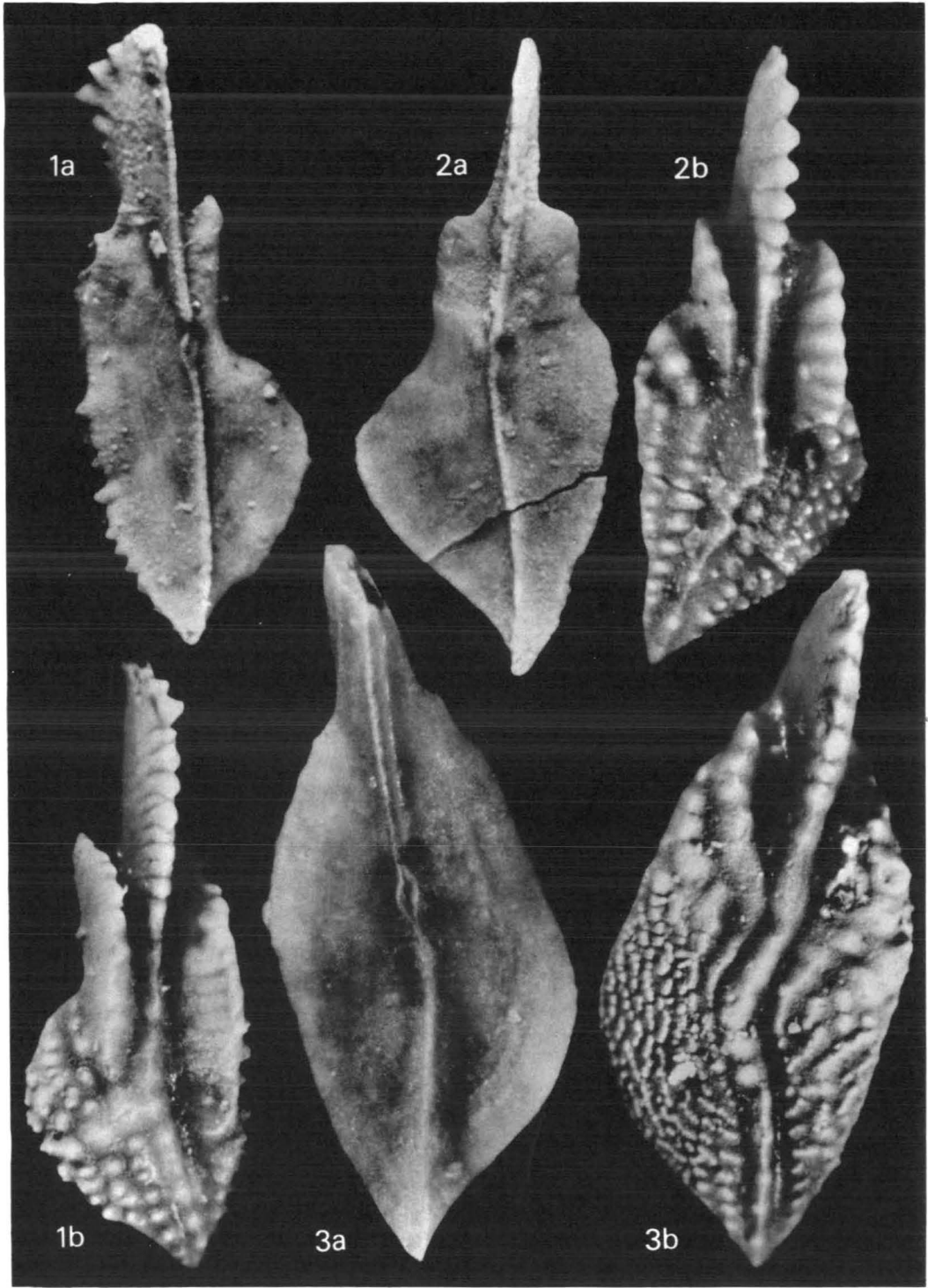


PLATE 76

Polygnathus glaber glaber Ulrich & Bassler, 1926

p. 190

Fig. 1a, b Oral and aboral views of specimen CPC 12713.

Fig. 2a, b, c Lateral, aboral, and oral views of specimen CPC 12710.

Polygnathus janetae sp. nov.

p. 192

Fig. 3a, b Aboral and oral views of paratype CPC 12718.

Fig. 4a, b, c Lateral, oral, and aboral views of **holotype** CPC 12717.

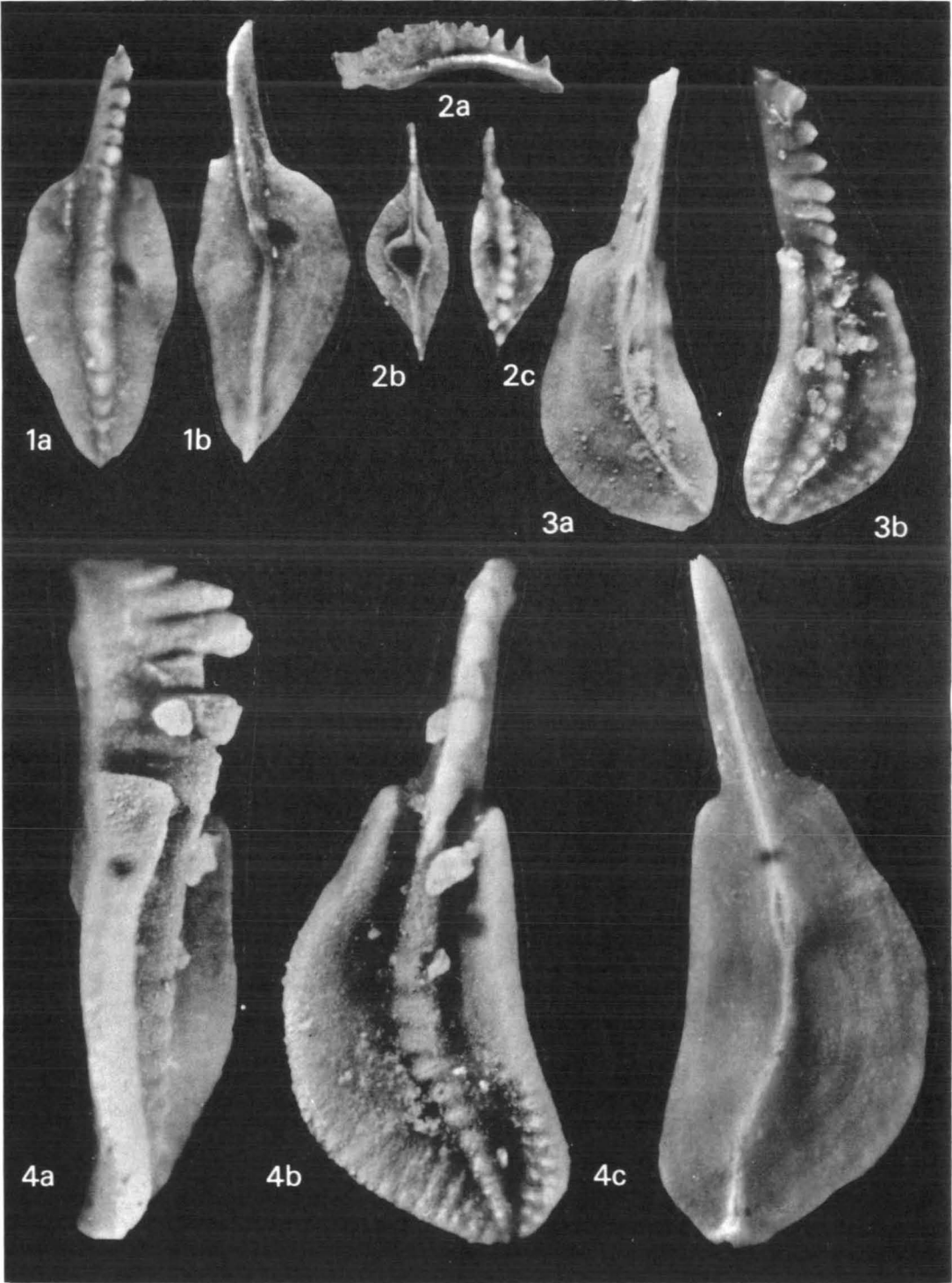


PLATE 77

Polygnathus normalis Miller & Youngquist, 1947

p. 194

Fig. 1a, b, c Lateral, aboral, and oral views of specimen CPC 12722.

Fig. 2a, b Oral and aboral views of specimen CPC 12725.

Fig. 3a, b Oral and aboral views of specimen CPC 12724.

Polygnathus nodoundatus Helms, 1961

p. 192

Fig. 4 Oral view of specimen CPC 12721.

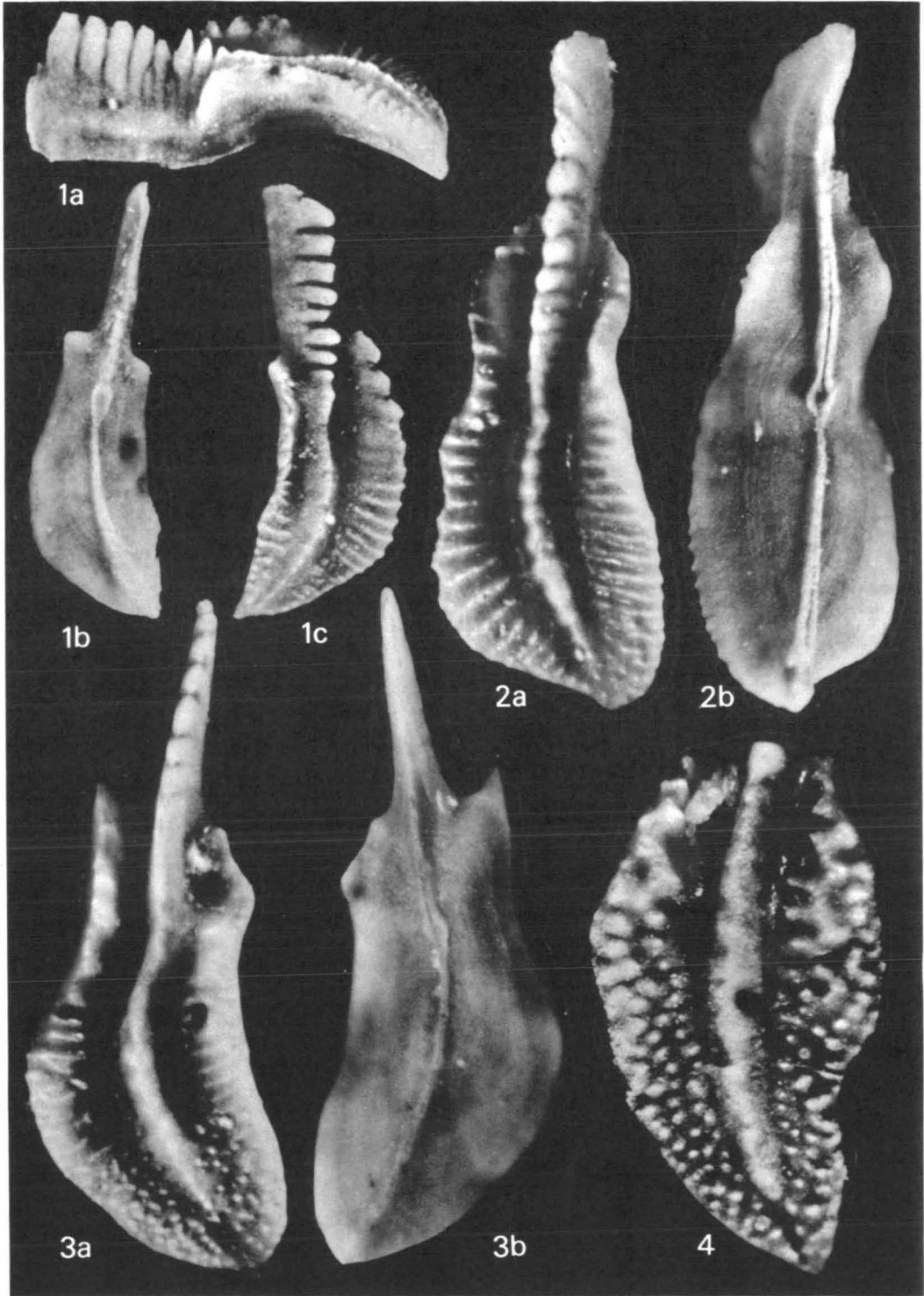


PLATE 78

Polygnathus cf. *P. norrisi* Uyeno, 1967

p. 195

Fig. 1a, b, c Lateral, aboral, and oral views of specimen CPC 12726.

Fig. 2a, b Oral and aboral views of specimen CPC 12728.

Fig. 3 Oral view of specimen CPC 12768.

Fig. 4a, b Aboral and oral views of specimen CPC 12727.

Polygnathus obliquicostatus Ziegler, 1962

p. 196

Fig. 5a, b, c Lateral, aboral, and oral views of specimen CPC 12729.

Polygnathus cf. *P. pennatus* Hinde, 1879

p. 196

Fig. 6a, b, c Oral, aboral, and lateral views of specimen CPC 12730.

Fig. 7a, b Aboral and oral views of specimen CPC 12731.

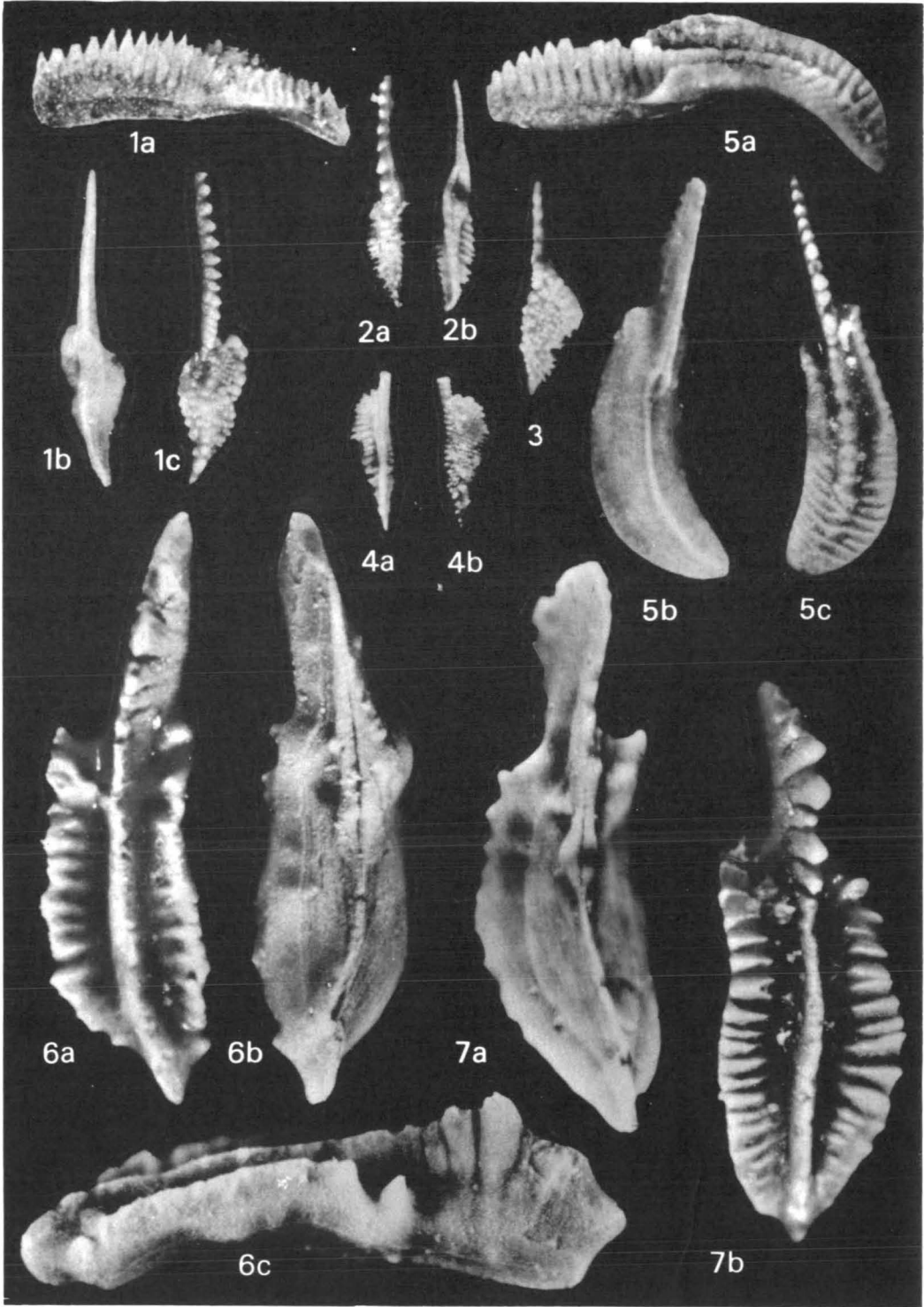


PLATE 79

Polygnathus perplexus Thomas, 1949

p. 197

Fig. 1a, b Aboral and oral views of specimen CPC 12733.

Fig. 5a, b, c Lateral, oral, and aboral views of specimen CPC 12732.

Polygnathus pollocki sp. nov.

p. 198

Fig. 2a, b Aboral and oral views of paratype CPC 12736.

Fig. 3a, b, c Lateral, oral, and aboral views of **holotype** CPC 12734.

Fig. 4a, b Oral and aboral views of paratype CPC 12735.

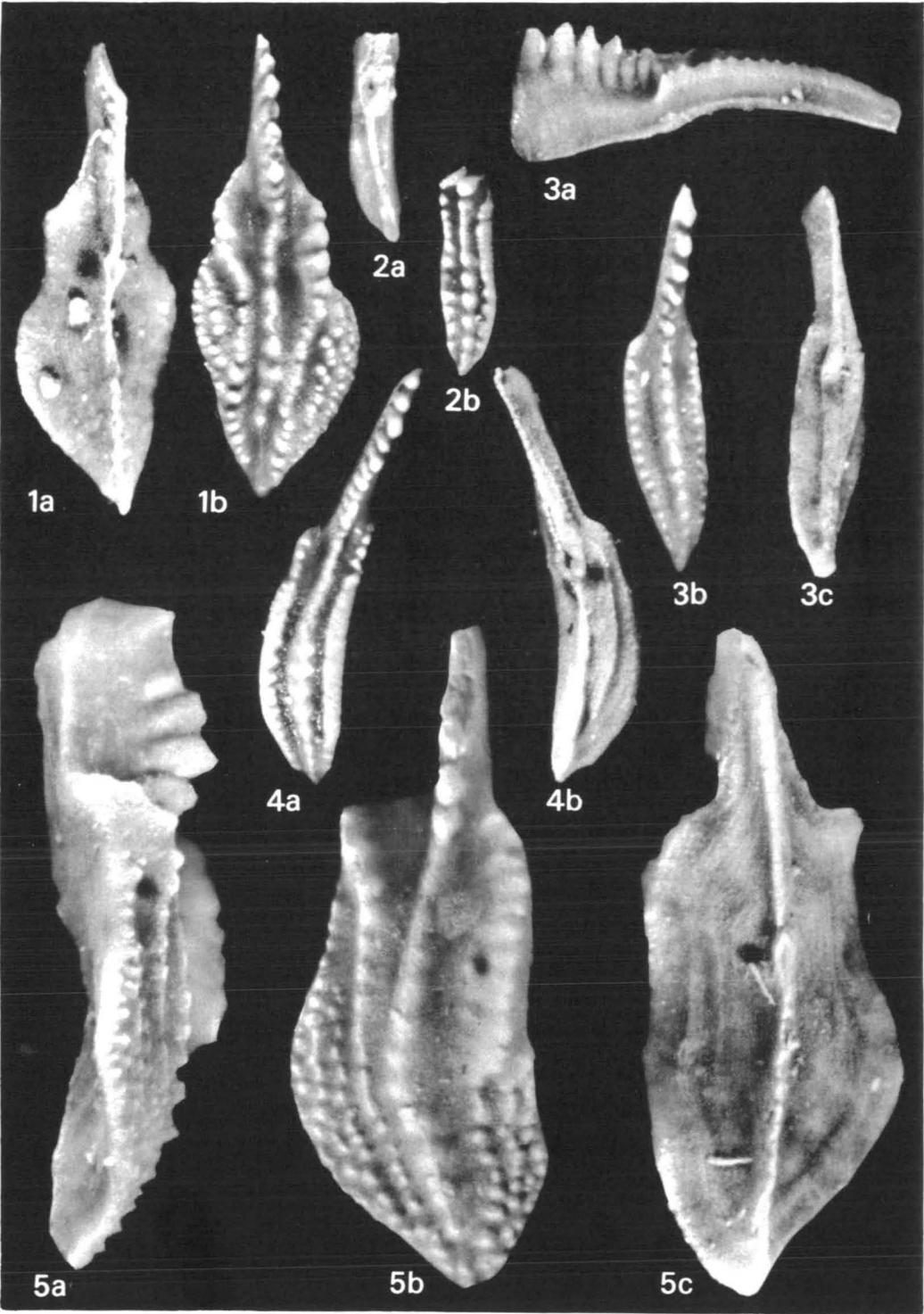


PLATE 80

Polygnathus seddoni sp. nov.

p. 198

Fig. 1a, b, c Lateral, aboral, and oral views of **holotype** CPC 12737.

Fig. 2a, b Aboral and oral views of paratype CPC 12740.

Fig. 3a, b Aboral and oral views of paratype CPC 12739.

Fig. 4a, b Oral and aboral views of paratype CPC 12738.

Polygnathus semicostatus Branson & Mehl, 1934

p. 201

Fig. 5a, b, c Aboral, oral, and lateral views of specimen CPC 12741.

Polygnathus spatulatus Youngquist, 1947

p. 202

Fig. 6a, b, c Lateral, aboral, and oral views of specimen CPC 12742.

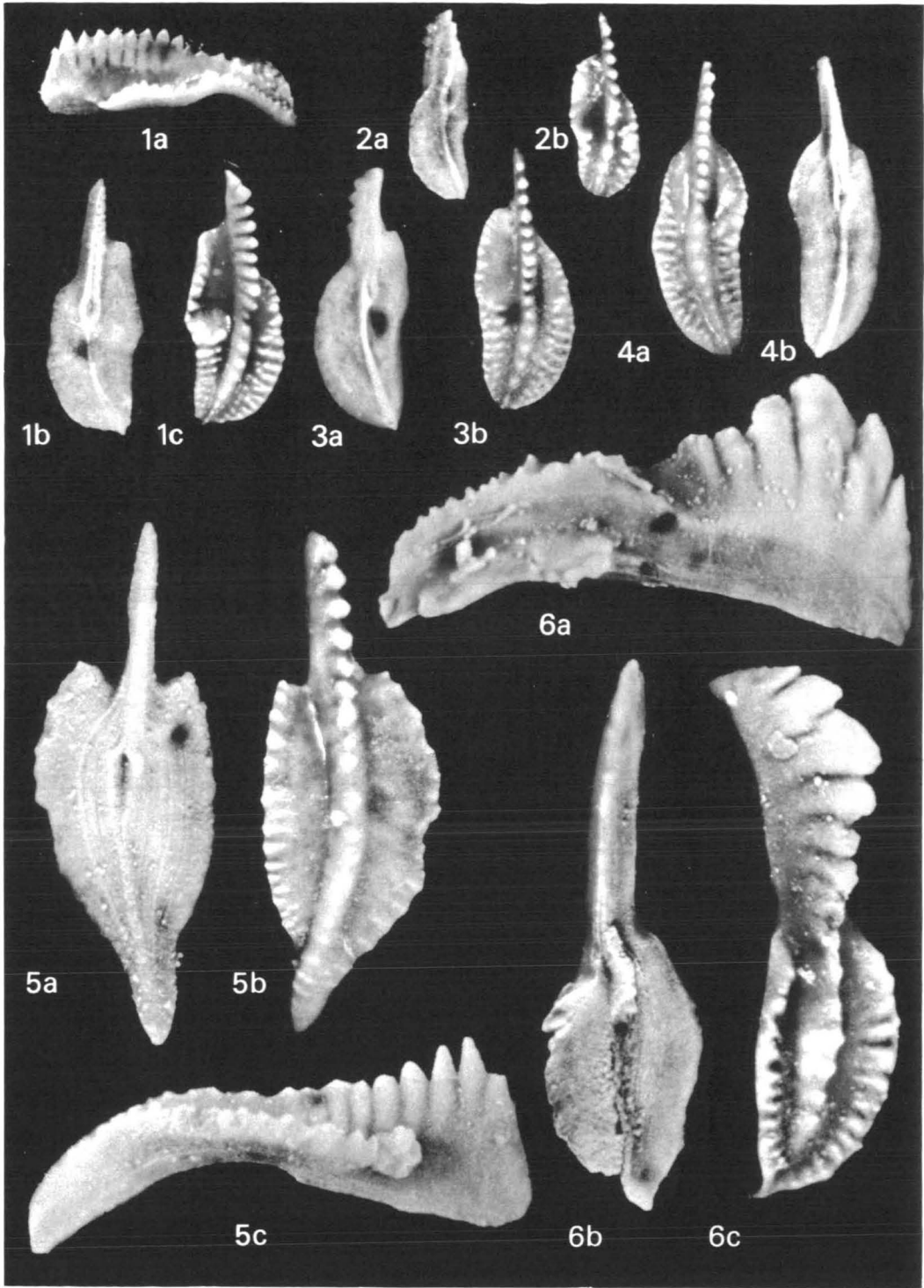


PLATE 81

Polygnathus subserratus Branson & Mehl, 1934

p. 202

Fig. 1a, b, c Lateral, oral, and aboral views of specimen CPC 12743.

Fig. 2a, b, c Lateral, oral, and aboral views of specimen CPC 12745.

Fig. 3a, b, c Lateral, oral, and aboral views of specimen CPC 12746.

Polygnathus triphyllatus (Ziegler, 1960)

p. 203

Fig. 4a, b, c Aboral, oral, and lateral views of specimen CPC 12747.

Fig. 5a, b, c Oral, aboral, and lateral views of specimen CPC 12748.

Fig. 6a, b, c Aboral, oral, and lateral views of specimen CPC 12749.

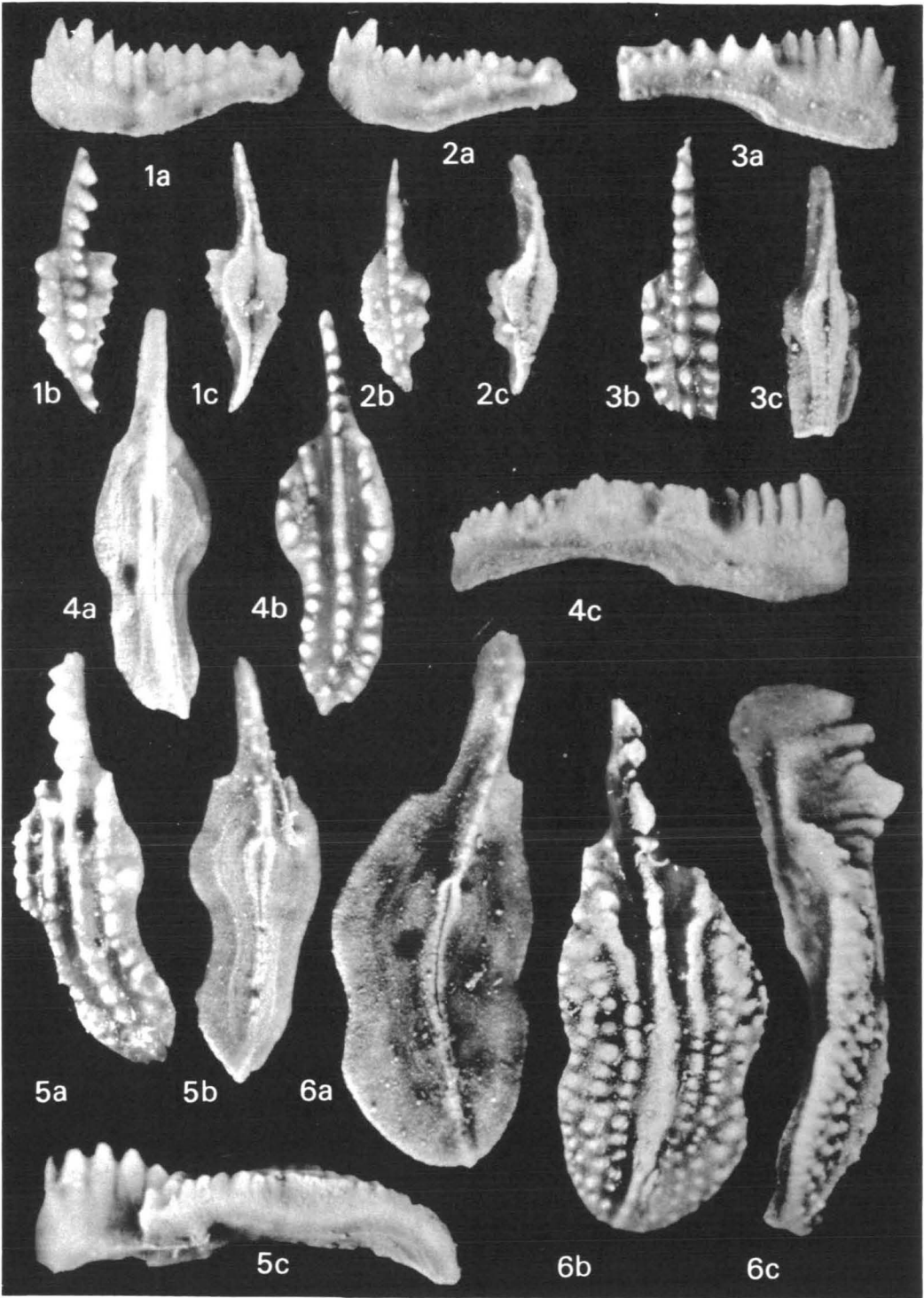


PLATE 82

Polygnathus cf. *P. webbi* Stauffer, 1938

p. 204

Fig. 1a, b, c Lateral, oral, and aboral views of specimen CPC 12750.

Fig. 2a, b, c Lateral, aboral and oral views of specimen CPC 12752.

Fig. 5a, b, c Lateral, oral, and aboral views of specimen CPC 12751.

Polygnathus xylus Stauffer, 1938

p. 204

Fig. 3 Oral view of specimen CPC 12753.

Fig. 4a, b, c Aboral, oral, and lateral views of specimen CPC 12756.

Fig. 6a, b, c Lateral, oral, and aboral views of specimen CPC 12755.

Fig. 7a, b, c Oral, aboral, and lateral views of specimen CPC 12754.

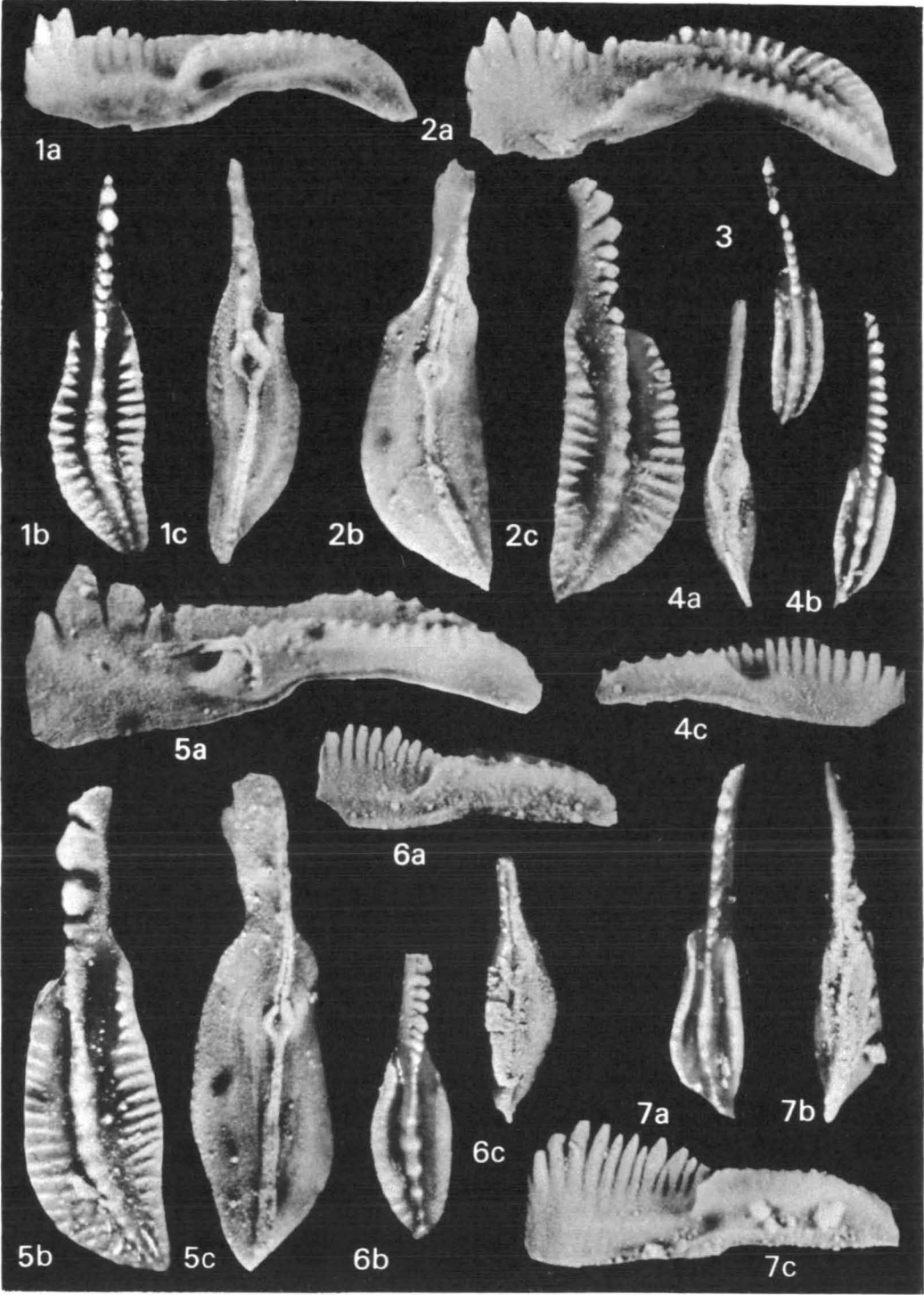


PLATE 83

Polygnathus znepolensis Spasov, 1965

p. 205

Fig. 1a, b Oral and aboral views of specimen CPC 12758.

Fig. 2a, b, c Lateral, aboral, and oral views of specimen CPC 12757.

Fig. 3a, b, c Lateral, oral, and aboral views of specimen CPC 12759.

Polygnathus sp. nov. A

p. 205

Fig. 4a, b Aboral and oral views of specimen CPC 12760.

Polygnathus sp. nov. C

p. 206

Fig. 5a, b, c Lateral, oral, and aboral views of specimen CPC 12762.

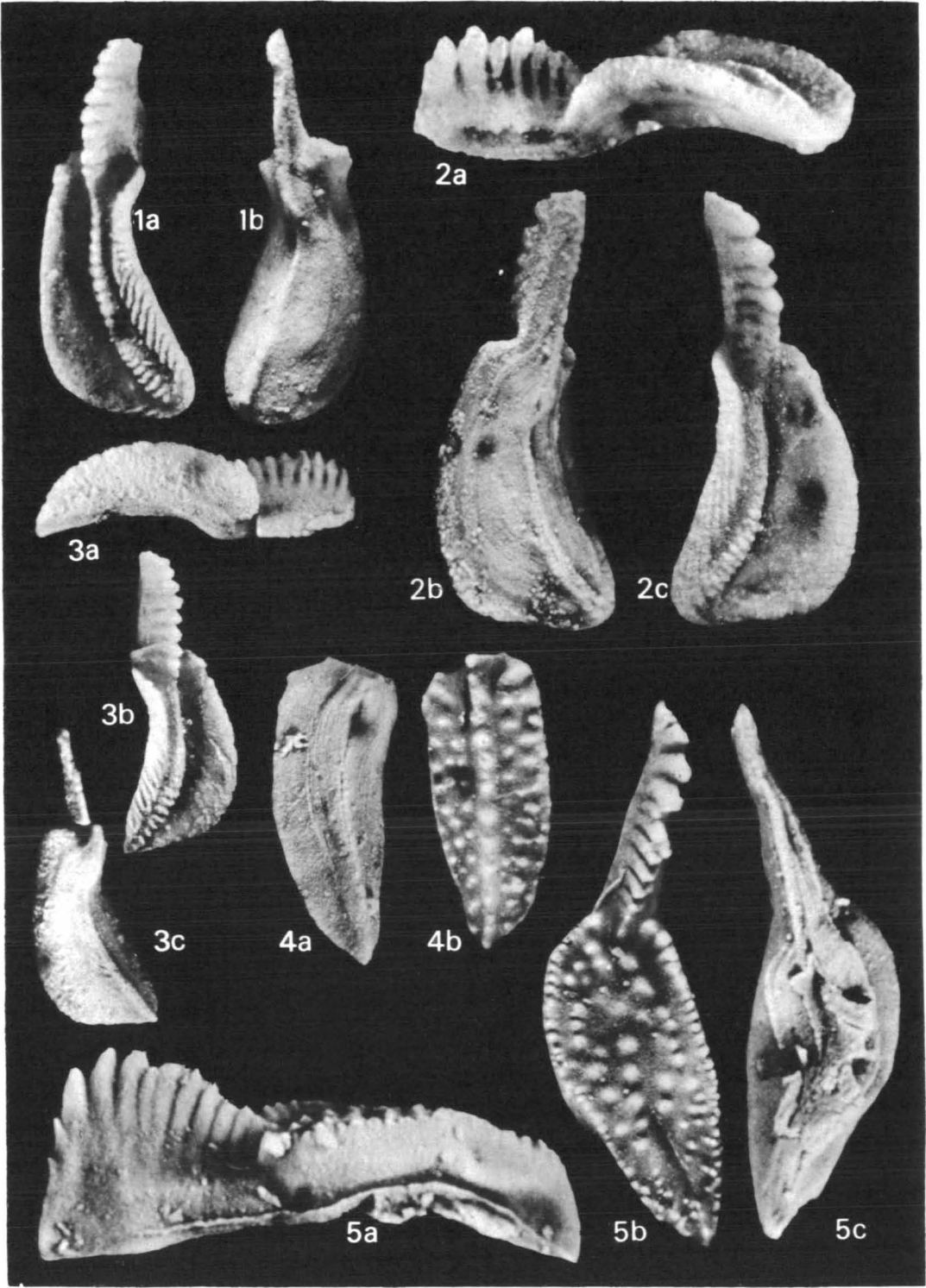


PLATE 84

Pelekysgnathus elevatus (Branson & Mehl, 1938)

p. 177

Fig. 1a, b, c Oral, lateral, and aboral views of specimen CPC 12763.

Fig. 2a, b, c Lateral and oral views of specimen CPC 12764.

Fig. 3a, b, c Oral, lateral, and aboral views of specimen CPC 12765.

Fig. 4a, b, c Lateral, aboral, and oral views of specimen CPC 12766.

Polygnathus sp. nov. B

p. 206

Fig. 5a, b, c Aboral, oral, and lateral views of specimen CPC 12761.

Pelekysgnathus sp.

p. 178

Fig. 6a, b, c Lateral, aboral, and oral views of specimen CPC 12767.

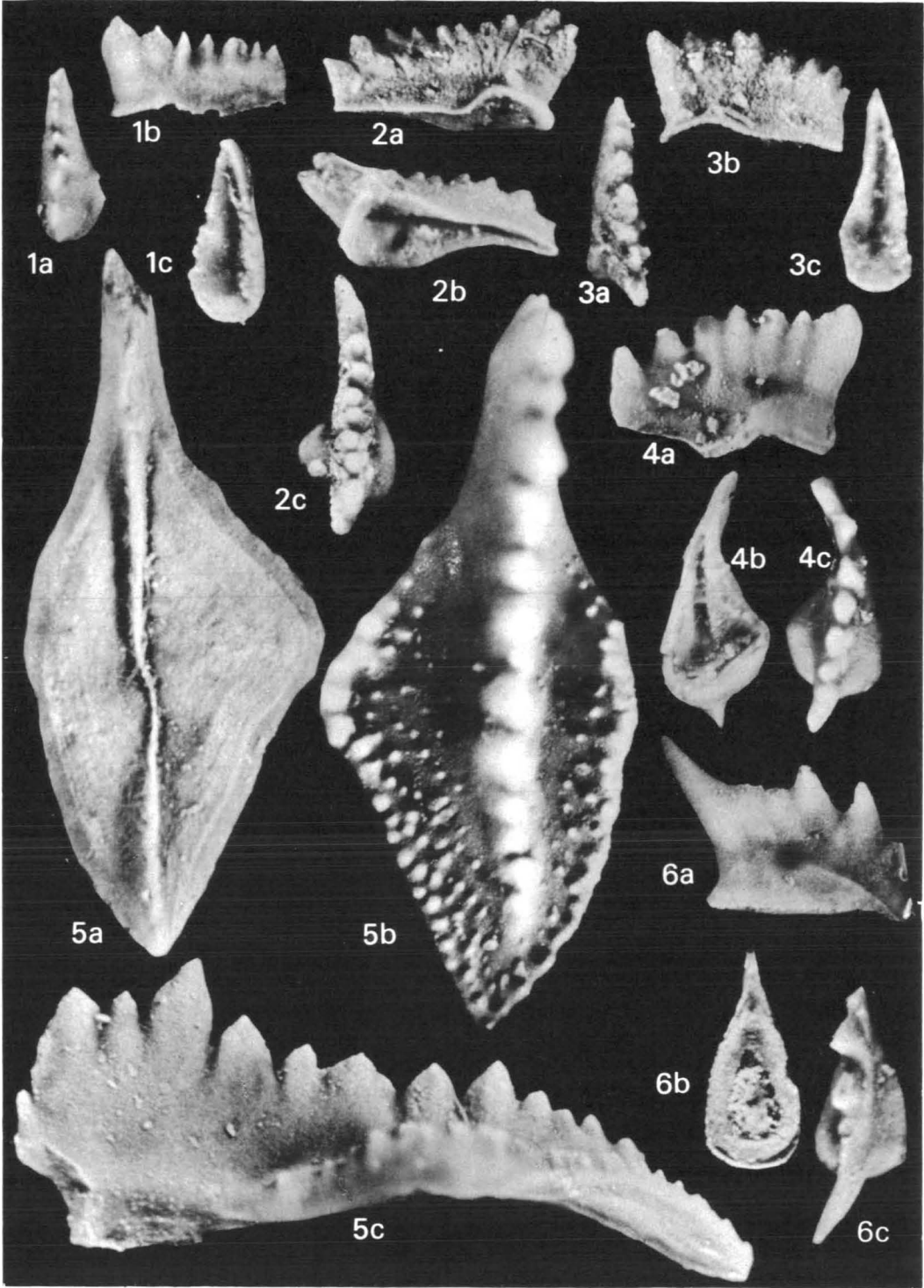


PLATE 85

Polygnathellus multident (Ulrich & Bassler, 1926)

p. 178

Fig. 1a, b, c Aboral, oral, and lateral views of specimen CPC 12769.

Fig. 2a, b, c Aboral, oral, and lateral views of specimen CPC 12772.

Fig. 3a, b, c, d Lateral, aboral, and oral views of specimen CPC 12770.

Fig. 4a, b, c Lateral, oral, and aboral views of specimen CPC 12771.

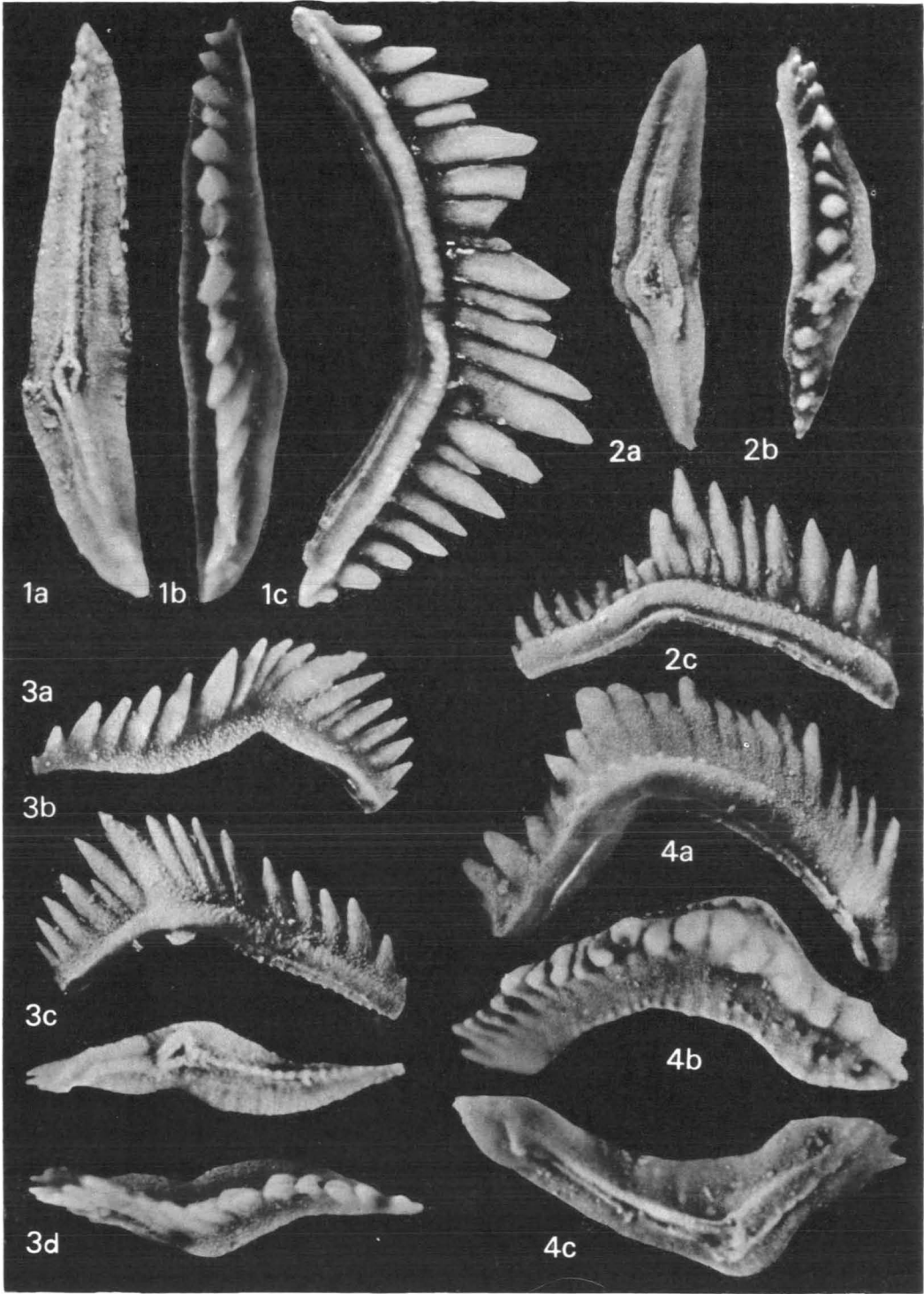


PLATE 86

Scaphignathus veliferus Helms, 1959

p. 208

Fig. 1a, b, c Lateral, aboral, and oral views of specimen CPC 12774.

Fig. 2a, b, c Lateral, aboral, and oral views of specimen CPC 12775.

Fig. 4a, b Lateral and aboral views of specimen CPC 12776.

Scaphignathus ziegleri Druce, 1969

p. 209

Fig. 3a, b, c Aboral, oral, and lateral views of specimen CPC 12779.

Fig. 5a, b Oral and aboral views of specimen CPC 12778.

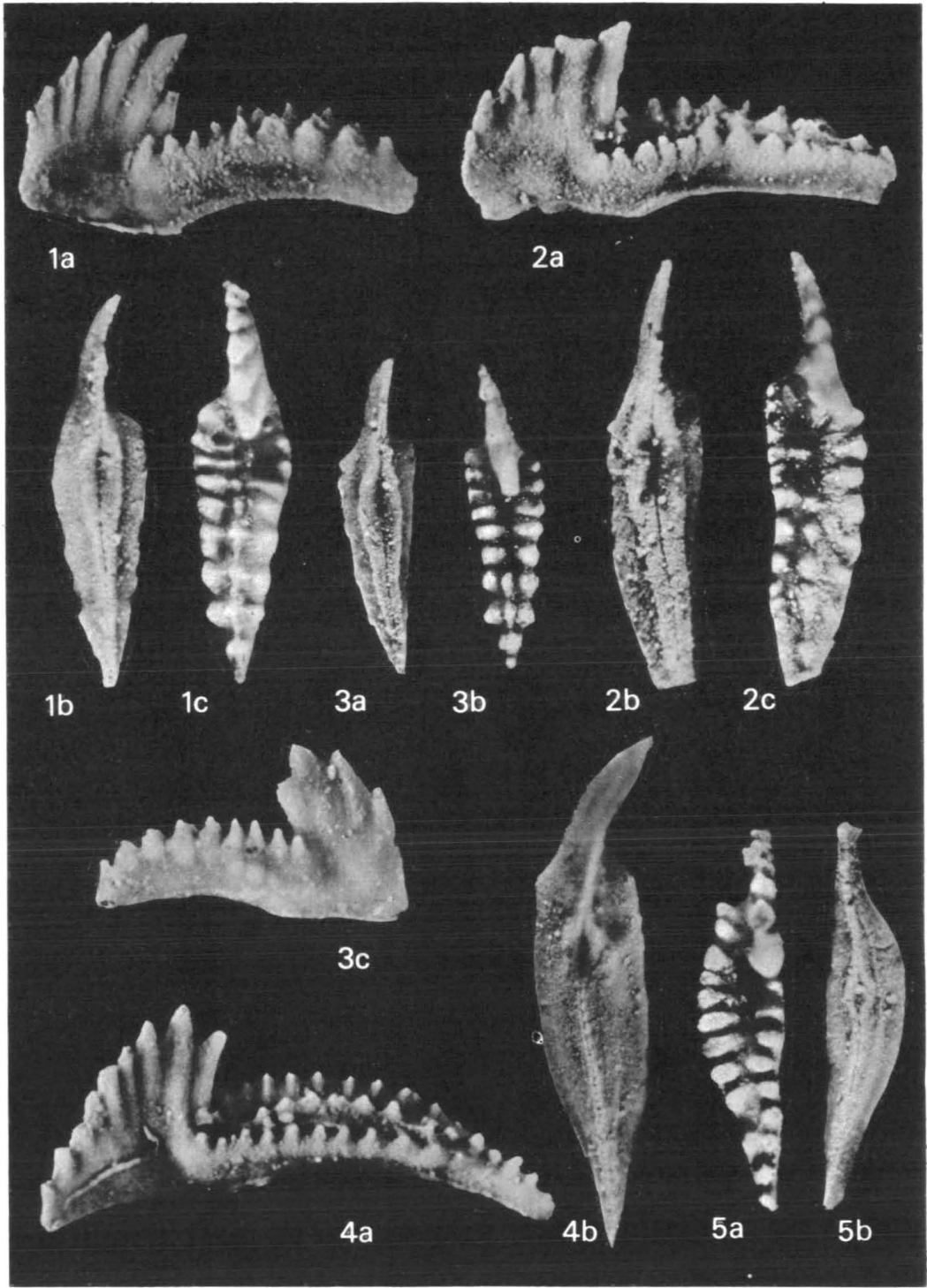


PLATE 87

- Scutula bipennata* Sannemann, 1955 p. 210
Fig. 1a, b Posterior and anterior views of specimen CPC 12780.
- Scutula sinepennata* Ziegler, 1958 p. 210
Fig. 2a, b Anterior and postero-oral views of specimen CPC 12782.
- Scutula venusta* Sanneman, 1955 p. 211
Fig. 3 Anterior view of specimen CPC 12783.
- Prioniodina? smithi* (Stauffer, 1935) p. 207
Fig. 4a, b Lateral views of specimen CPC 12789.
Fig. 5 Lateral view of specimen CPC 12790.
Fig. 6a, b Lateral views of specimen CPC 12788.
- Polygnathellus* cf. *P. typicalis* Bassler, 1925 p. 179
Fig. 7a, b Lateral and oral views of specimen CPC 12773.

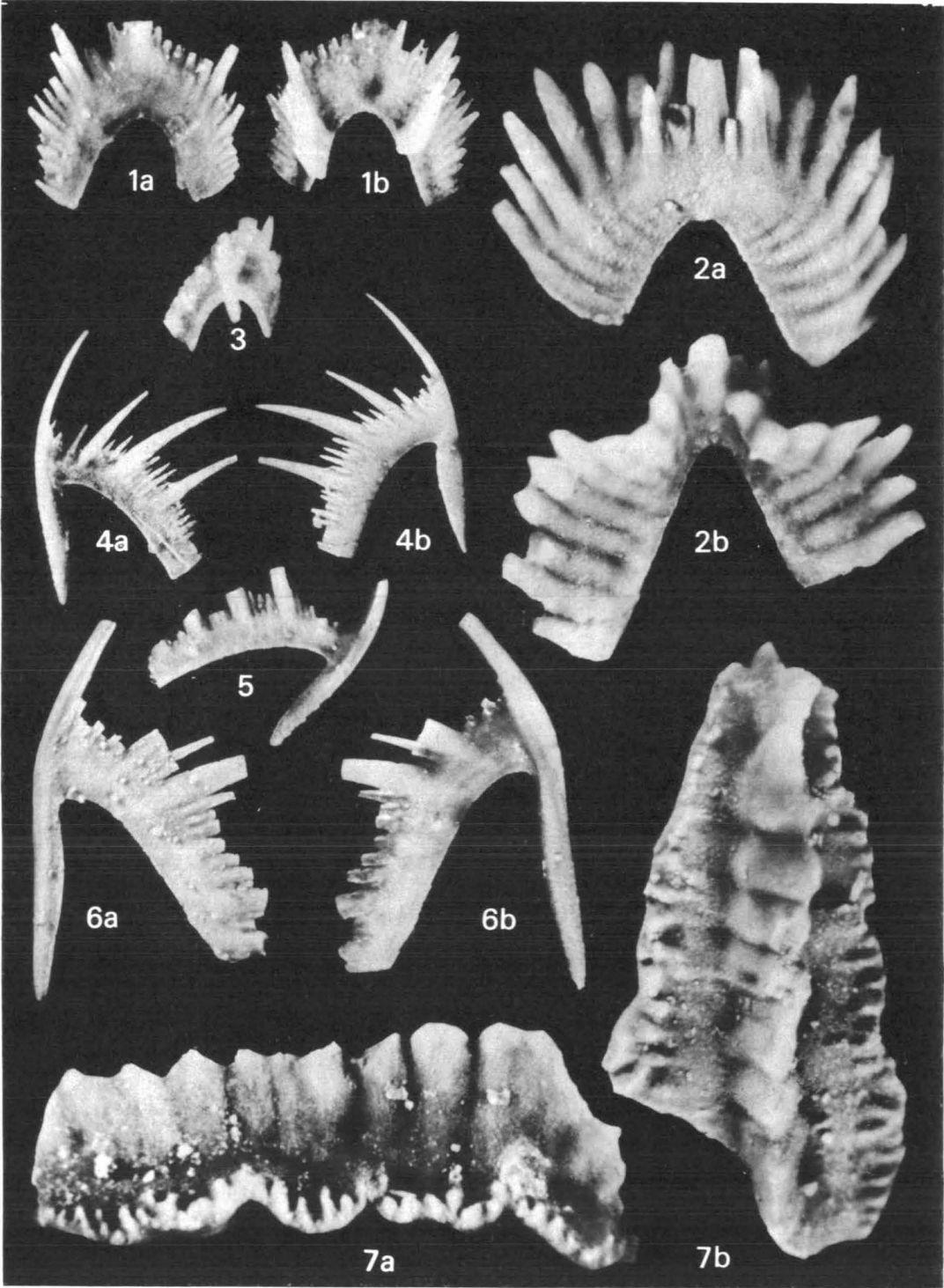


PLATE 88

- Polylophodonta confluens* (Ulrich & Bassler, 1926) p. 206
 Fig. 1a, b Oral and aboral views of specimen CPC 12784.
- Polylophodonta elongata* Druce, 1969 p. 207
 Fig. 2a, b Oral and aboral views of specimen CPC 12785.
 Fig. 3 Oral view of specimen CPC 12786.
 Fig. 5a, b, c Lateral, aboral, and oral views of specimen CPC 12787.
- Spathognathodus fitzroyi* sp. nov. p. 213
 Fig. 4a, b Aboral and lateral view of **holotype** CPC 12795 (Same specimens Pl. 94, fig. 2a, b).
 Fig. 8a, b, c Aboral and two lateral views of paratype CPC 12796.
- Spathognathodus* cf. *S. brevis* Bischoff & Ziegler, 1957 p. 213
 Fig. 6 Lateral view of specimen CPC 12794.
- Spathognathodus bohlenanus* Helms, 1959 p. 212
 Fig. 7a, b Lateral and aboral views of specimen CPC 12793.

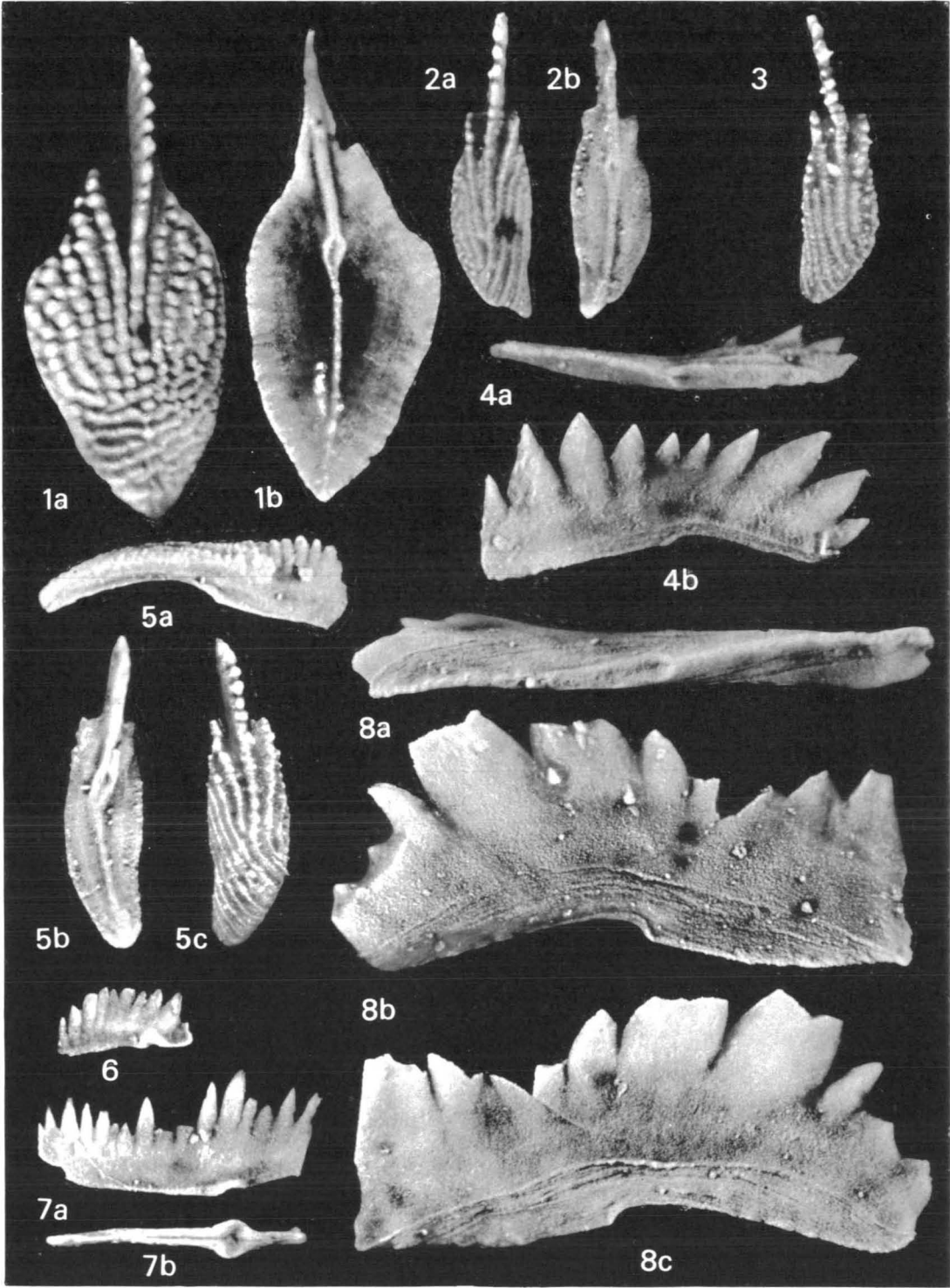


PLATE 89

- Pseudopolygnathus* sp. nov. A p. 208
Fig. 1a, b Aboral and oral views of specimen CPC 12791.
Fig. 2a, b, c Aboral, oral, and lateral views of specimen CPC 12792.
- Spathognathodus stabilis* (Branson & Mehl, 1934) p. 215
Fig. 3a, b Lateral and aboral views of specimen CPC 12798.
Fig. 5a, b Lateral and aboral views of specimen CPC 12799.
Fig. 7a, b Lateral and aboral views of specimen CPC 12800.
Fig. 10a, b Lateral and aboral views of specimen CPC 12801.
- Spathognathodus strigosus* (Branson & Mehl, 1943) p. 216
Fig. 4a, b Lateral and aboral views of specimen CPC 12802.
Fig. 8a, b, c Aboral and two lateral views of specimen CPC 12805.
Fig. 9a, b Lateral and aboral views of specimen CPC 12803.
Fig. 11a, b Lateral and aboral views of specimen CPC 12804.
- Spathognathodus* cf. *S. robustus* (Branson & Mehl, 1934) p. 214
Fig. 6a, b Lateral and aboral views of specimens CPC 12797.

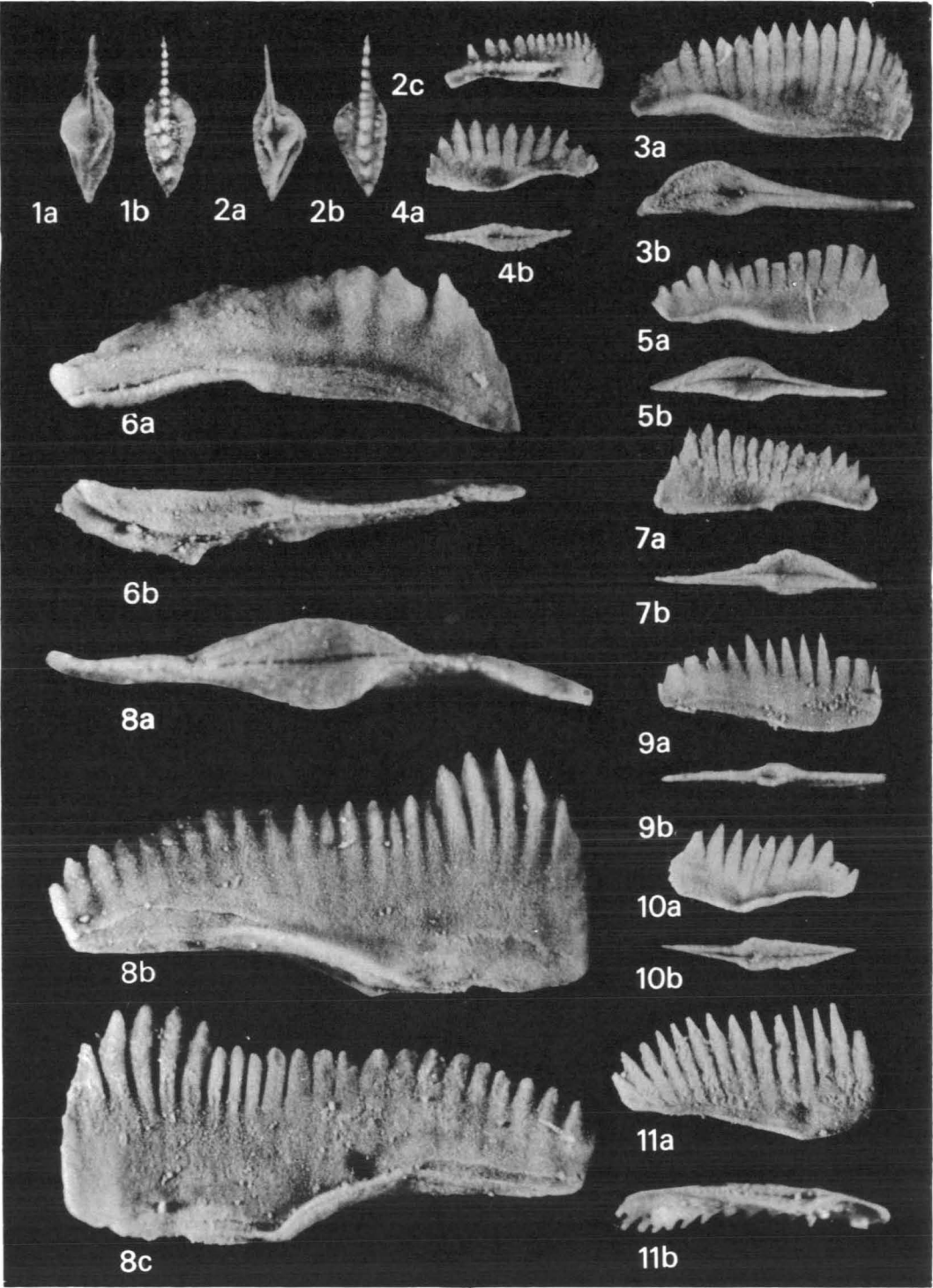


PLATE 90

- Spathognathodus strigosus* (Branson & Mehl, 1934) p. 216
Fig. 1a, b, c Lateral and aboral views of specimen CPC 12806.
Fig. 2a, b, c Lateral and aboral views of specimen CPC 12807.
Fig. 3a, b, c Lateral and aboral views of specimen CPC 12808.
- Spathognathodus* sp. nov. A p. 217
Fig. 4a, b Lateral and aboral views of specimen CPC 12809.
- Spathognathodus* sp. nov. B p. 217
Fig. 5a, b Lateral and aboral views of specimen CPC 12810.
- Spathognathodus* sp. nov. C p. 217
Fig. 6a, b, c Aboral, oral, and lateral views of specimen CPC 12811.
- Spathognathodus* sp. nov. D p. 218
Fig. 7a, b Aboral and lateral views of specimen CPC 12813.
- Spathognathodus* sp. nov. F p. 218
Fig. 8a, b Aboral and lateral views of specimen CPC 12815.

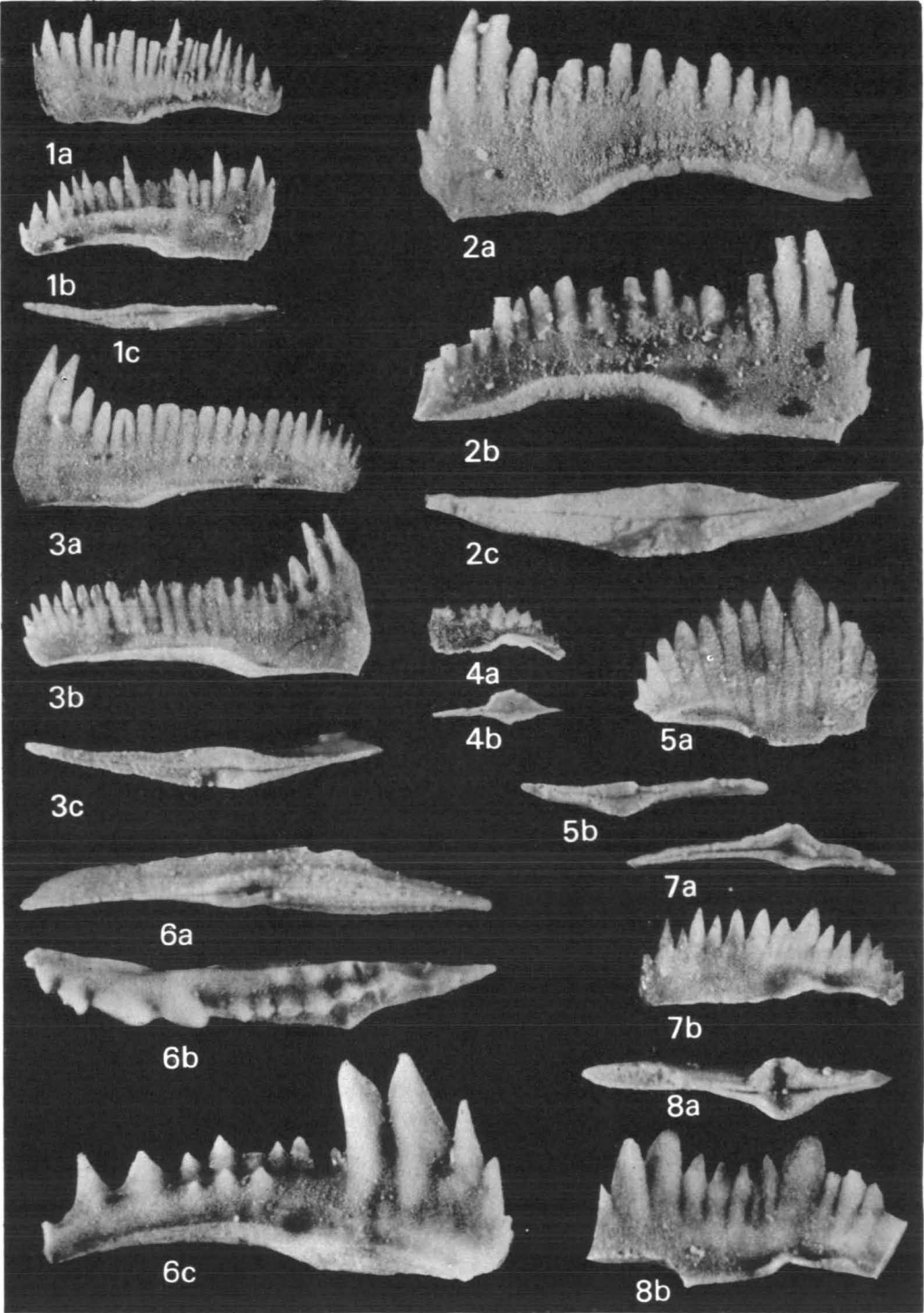


PLATE 91

- Spathognathodus* sp. nov. C p. 217
Fig. 1a, b, c, d Lateral, oral, and aboral views of specimen CPC 12812.
- Spathognathodus* sp. G p. 218
Fig. 2a, b Lateral and aboral views of specimen CPC 12816.
- Spathognathodus* sp. I p. 219
Fig. 3a, b Lateral and aboral views of specimen CPC 12818.
- Spathognathodus* sp. H p. 219
Fig. 4a, b Aboral and lateral views of specimen CPC 12817.
- Spathognathodus* sp. E p. 218
Fig. 5a, b, c Aboral, lateral, and oral views of specimen CPC 12814

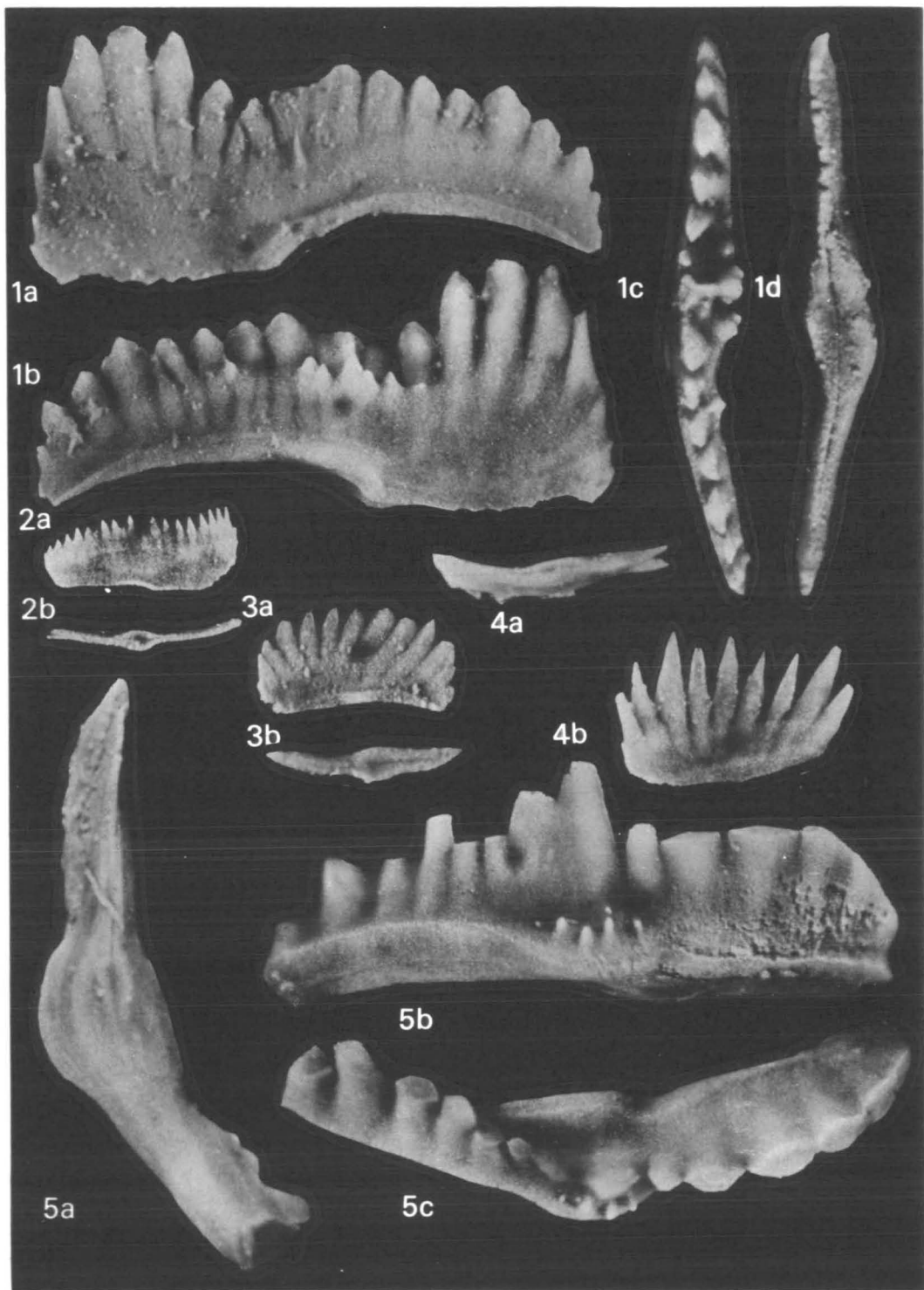


PLATE 92

Synprioniodina cf. *S. alternata* Bassler, 1925

p. 219

- Fig. 1a, b Lateral view of specimen CPC 12819.
- Fig. 2 Lateral view of specimen CPC 12822.
- Fig. 3a, b Lateral views of specimen CPC 12821.
- Fig. 4a, b Lateral views of specimen CPC 12823.
- Fig. 5 Lateral view of specimen CPC 12820 lacking alternating dentition.

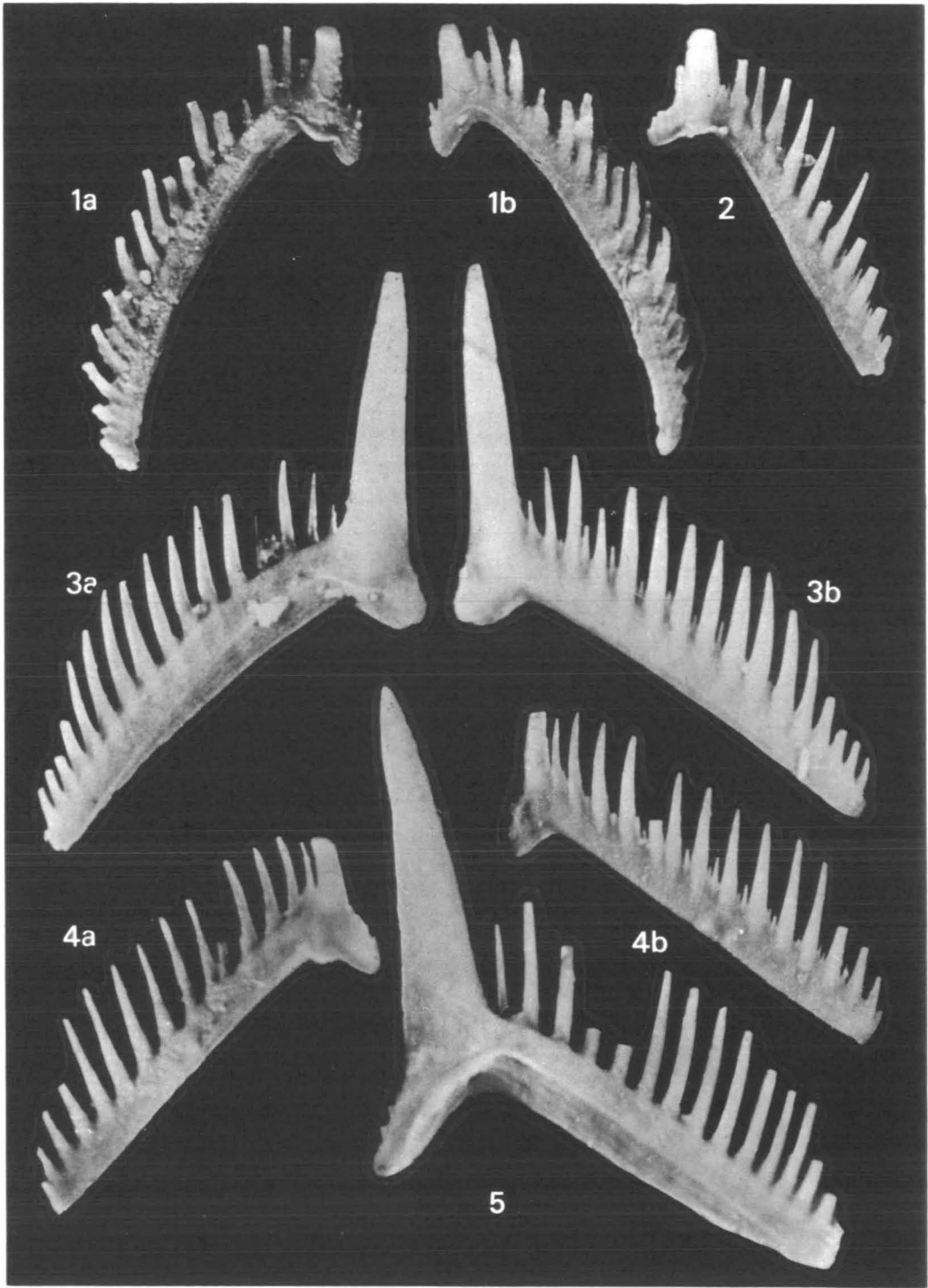


PLATE 93

- Synprioniodina* sp. A p. 220
Fig. 1a, b Lateral views of specimen CPC 12824.
Fig. 2a, b Lateral views of specimen CPC 12825.
- Synprioniodina* sp. B p. 220
Fig. 3a, b Lateral views of specimen CPC 12826.
Fig. 4a, b Lateral views of specimen CPC 12827.
- Tripodellus robustus* Bischoff, 1957 p. 220
Fig. 5a, b Oral and lateral views of specimen CPC 12829.
Fig. 6a, b Oral and lateral views of specimen CPC 12828.
- gen. nov. et sp. nov. Druce, 1969 p. 221
Fig. 7 Oral view of specimen CPC 12830.
- Lonchodina arcuata* Ulrich & Bassler, 1926 p. 125
Fig. 8a, b, c Lateral views of specimen CPC 12831.

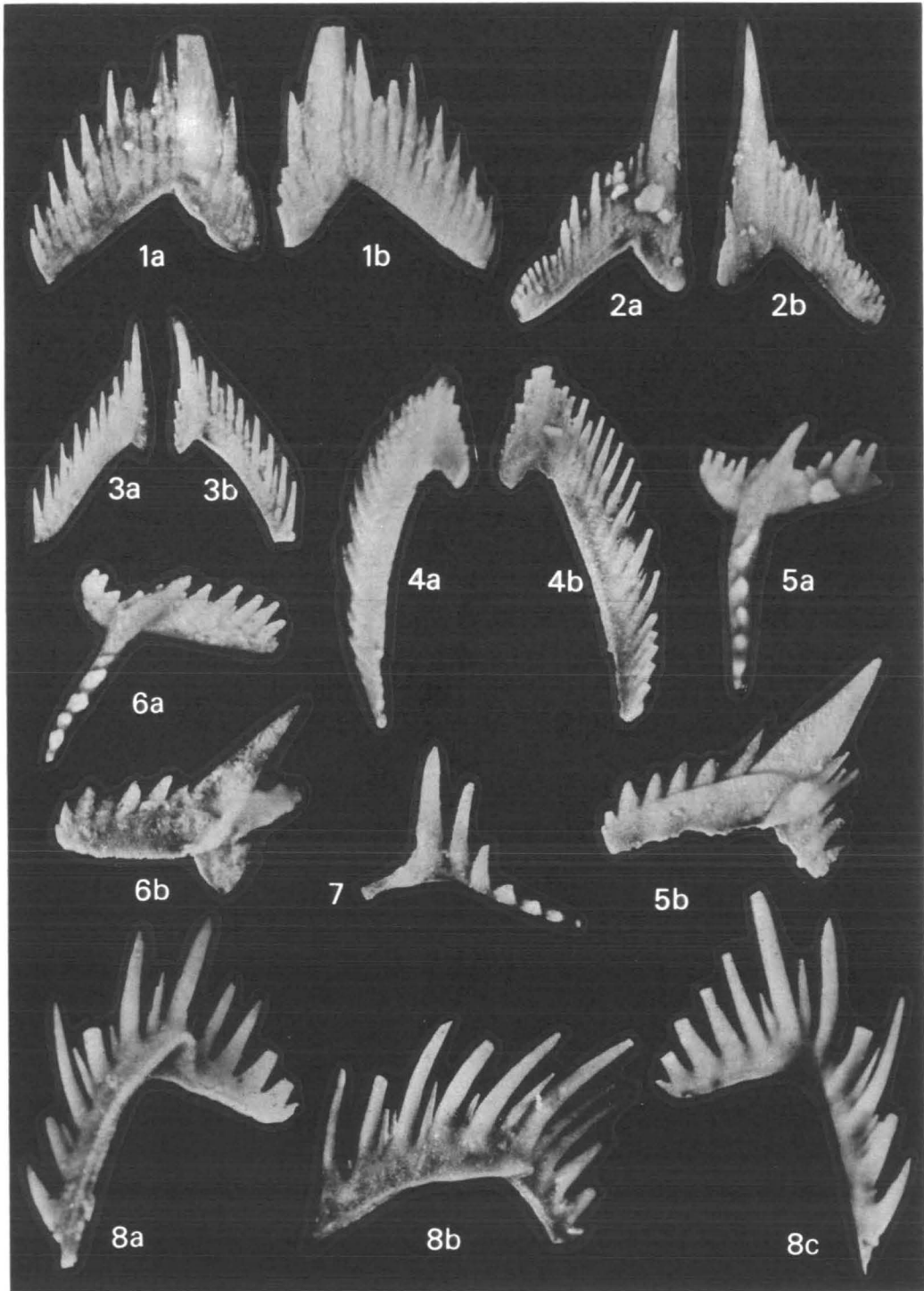


PLATE 94

- Ozarkodina?* sp. Seddon, 1970 p. 145
Fig. 1a, b Lateral views of specimen CPC 12848.
- Spathognathodus fitzroyi* sp. nov. p. 213
Fig. 2a, b Lateral and aboral views of **holotype** CPC 12795.
- Hindeodella corpulenta* Branson & Mehl, 1934 p. 96
Fig. 3a, b Lateral views of specimen CPC 12322.
- Lonchodina* sp. nov. A p. 126
Fig. 4 Lateral view of specimen CPC 12842.

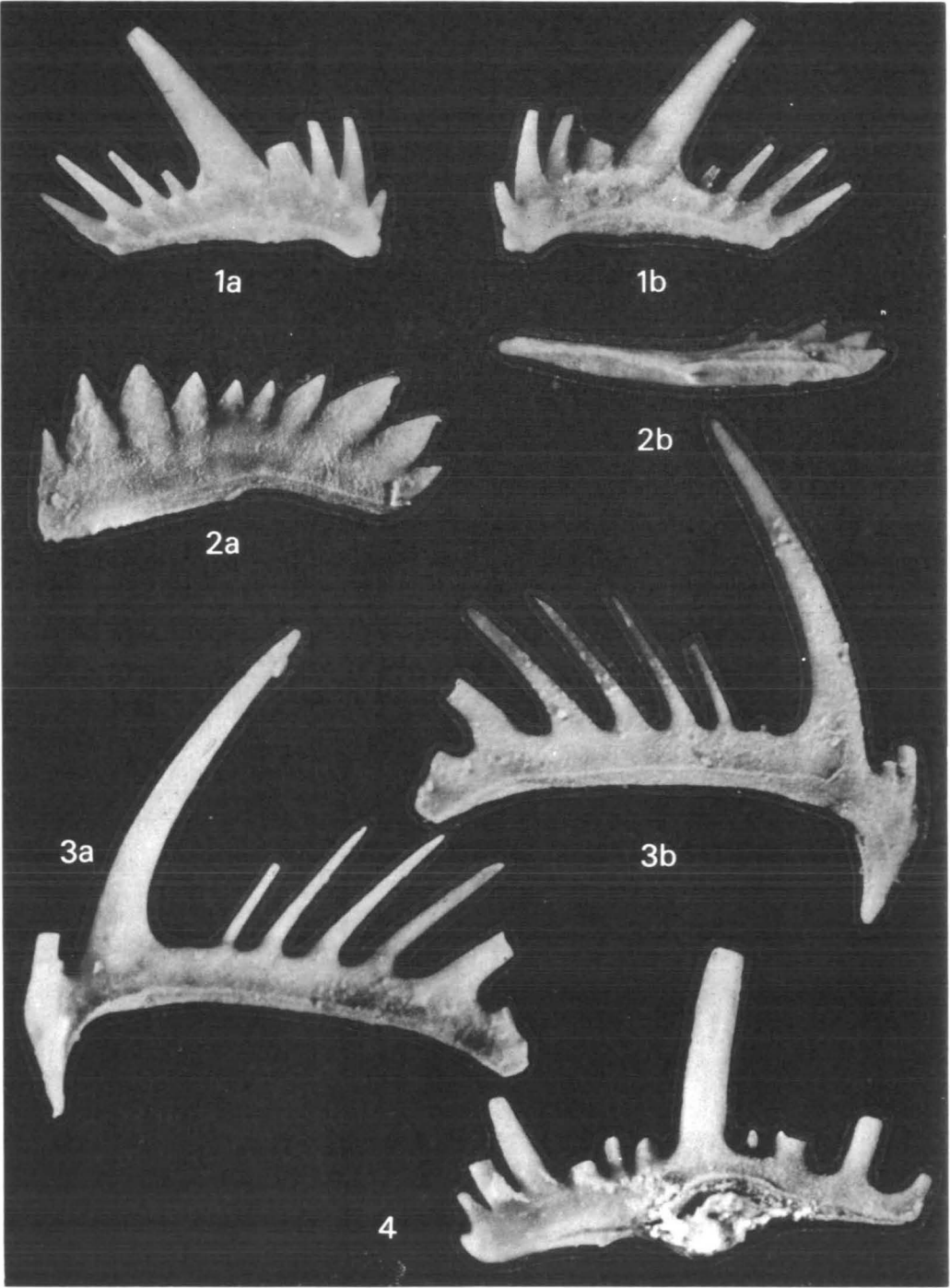


PLATE 95

Ancyrognathus irregularis Branson & Mehl, 1934

p. 69

Fig. 1a, b, c Lateral, aboral, and oral views of specimen CPC 13805.

Fig. 2a, b Aboral and oral views of specimen CPC 13806 showing the damaged and repaired inner platform margin.

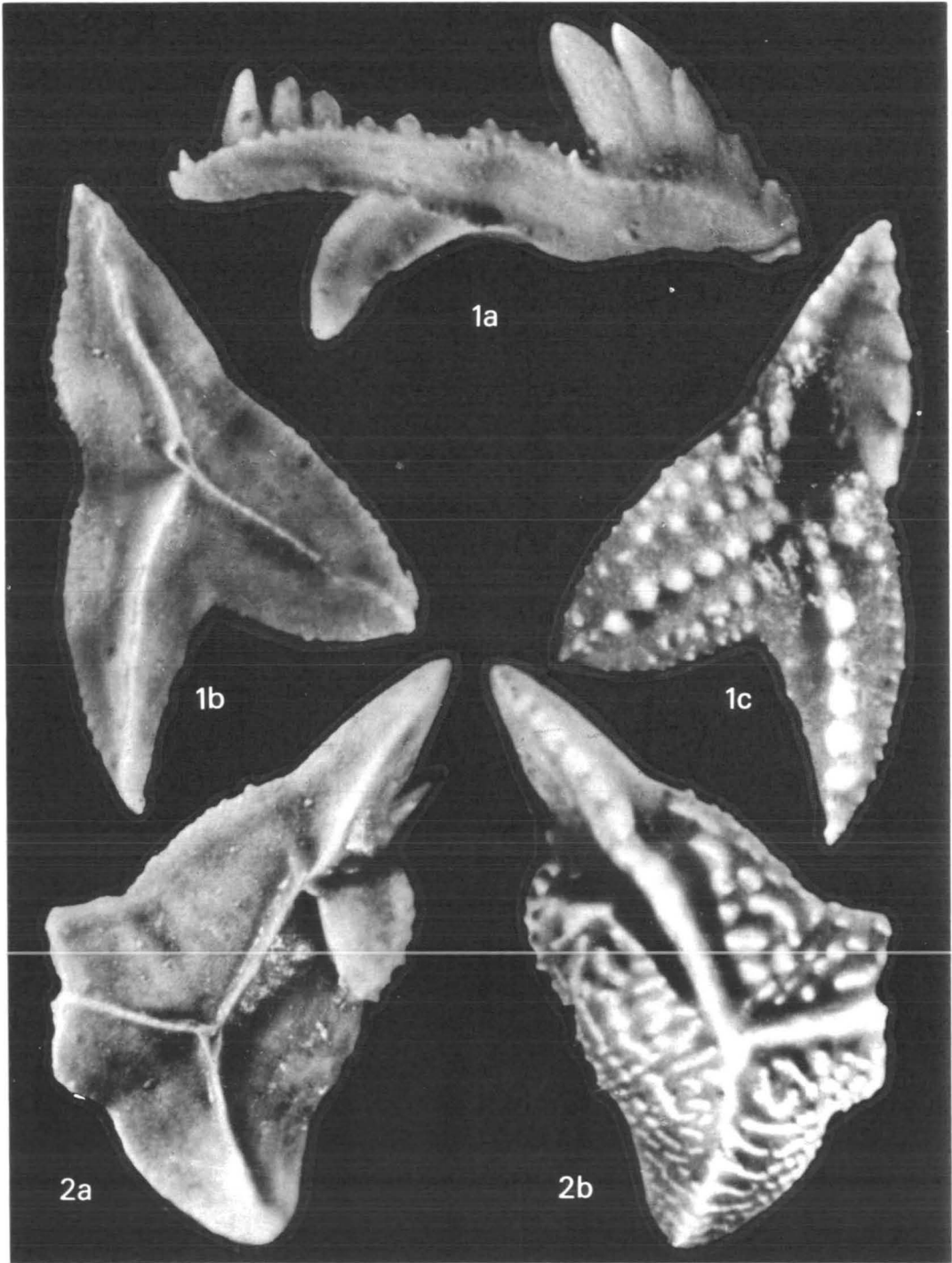


PLATE 96

Palmatolepis sp. nov. B

p. 176

Fig. 1a, b, c Oral, aboral, and lateral views of specimen CPC 13842.

Polygnathus sp. A Druce, 1969

p. 205

Fig. 2a, b, c Lateral, aboral, and oral views of specimen CPC 12843.

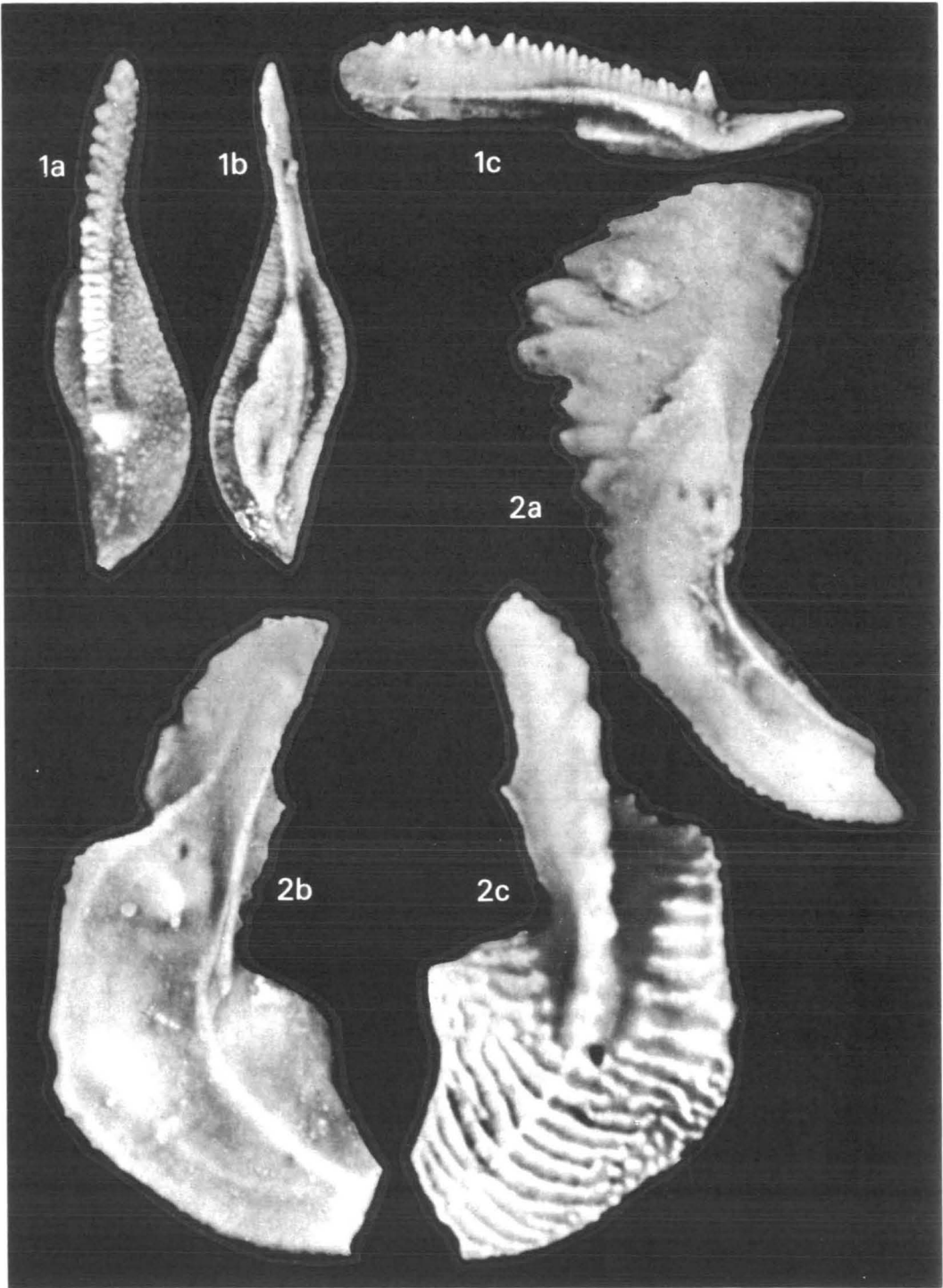


PLATE 97

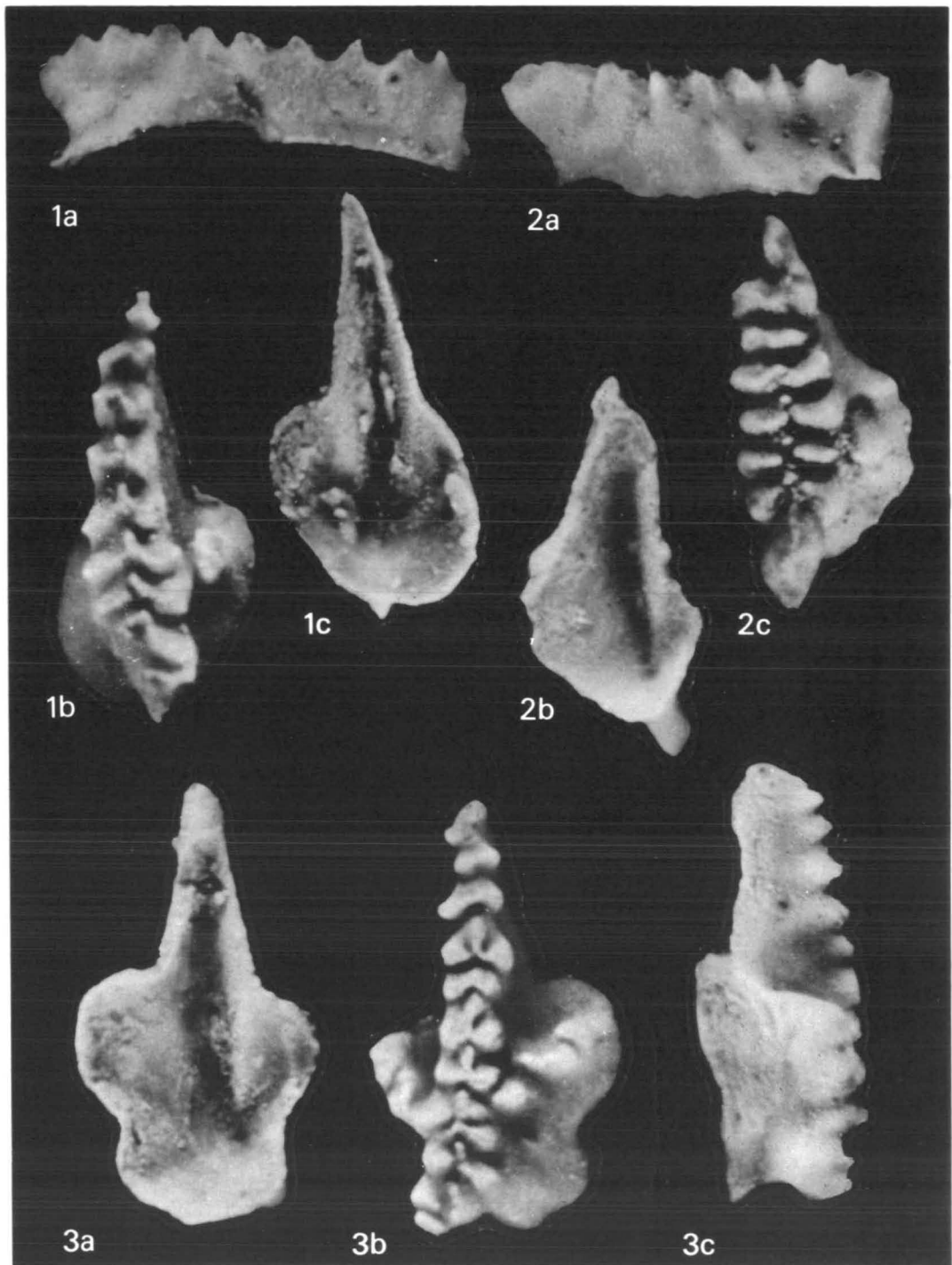
Icriodus incrassatus subsp. nov. d

p. 116

Fig. 1a, b, c Lateral, oral, and aboral views of specimen CPC 13841.

Fig. 2a, b, c Lateral, aboral, and oral views of specimen CPC 13839.

Fig. 3a, b, c Aboral, oral, and lateral views of specimen CPC 13840.



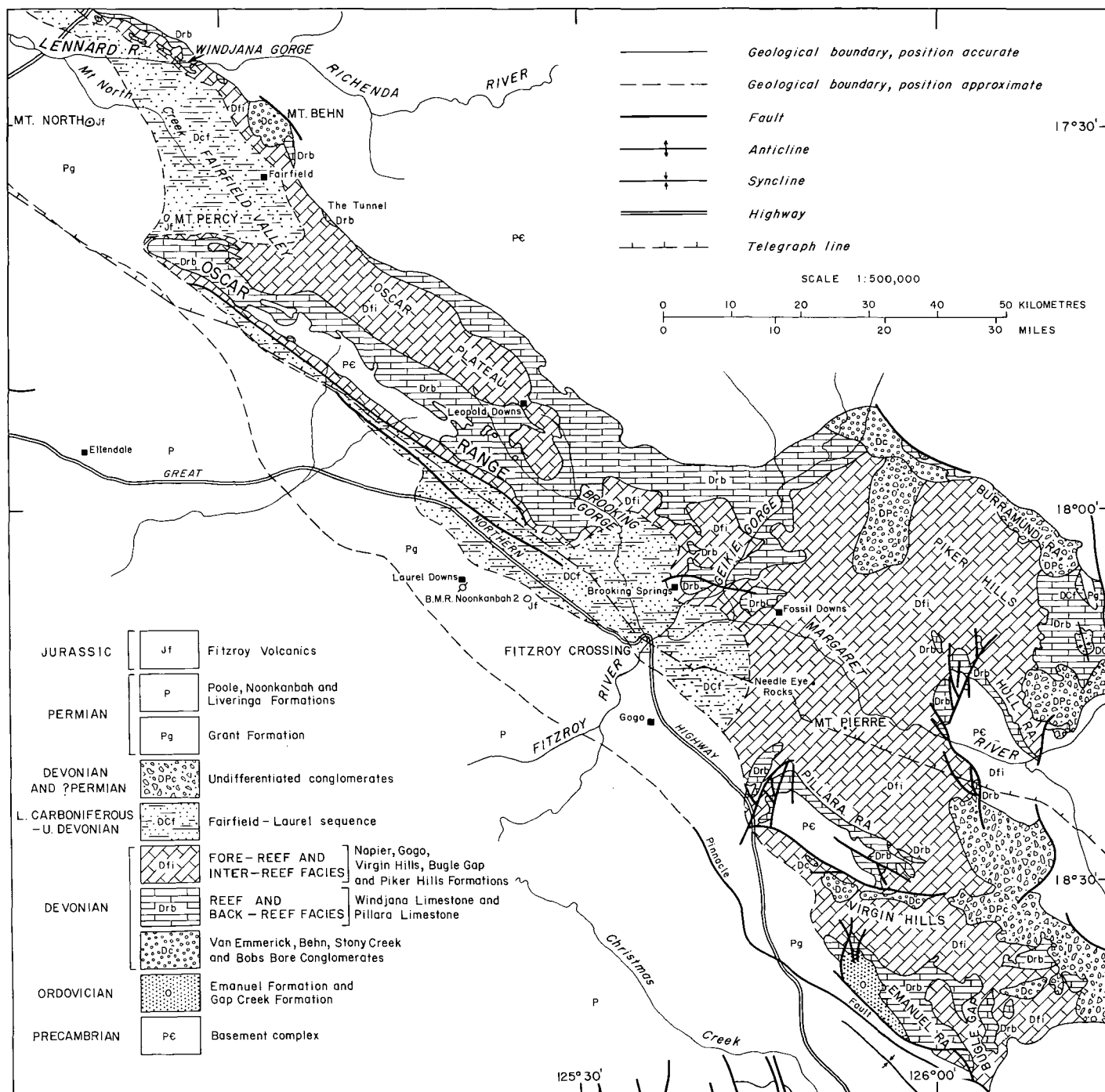


Fig. 27. Map of the solid geology of the Northern Canning Basin.

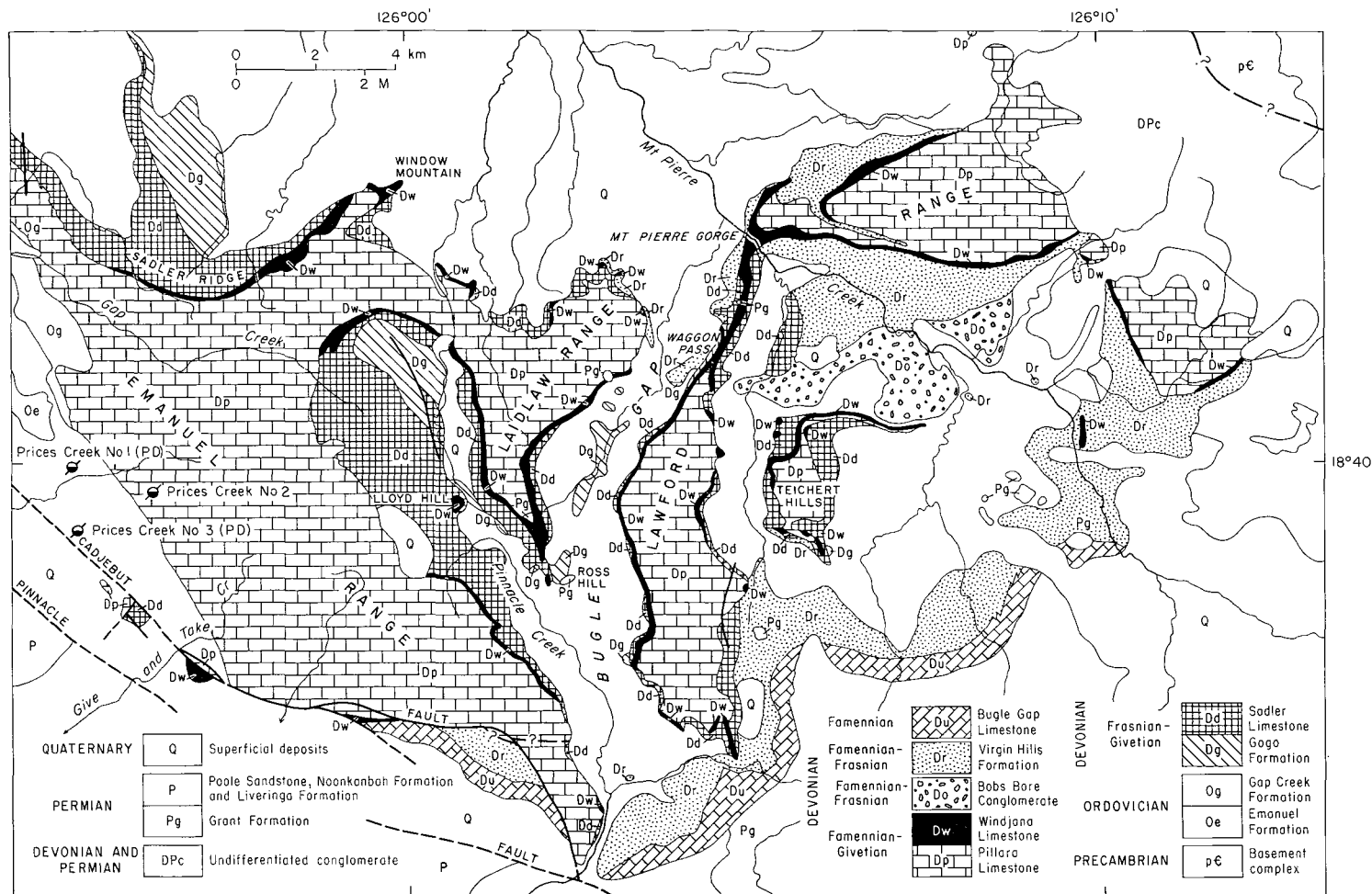


Fig. 28. Geology of the Laidlaw Range, Emanuel Range and Lawford Range Area — Canning Basin.

Sadi	Gogo	FORMATION
Lower P. asymmetricus		ZONE
19494	19495	SAMPLE NUMBER / SPECIES
19496	19497	
19498	19499	
19500	19501	
19502	19503	
19504	19505	
		Polygnathus xylus
		Hindeodella compressa
		Icriodus alternatus s.s.
		Icriodus alternatus curvirostratus
		Spathognathodus sp. nov. F
		Lonchodina arcuata
		Lonchodina typicalis
		Ozarkodina macra
		Synprioniodina cf. S. alternata
		Hindeodella subtilis
		Polygnathus foliatus
		Ancyrodella rotundiloba s.s.
		Bryantodus typicus
		Icriodus incrassatus subsp. c
		Icriodus symmetricus circularis
		Ozarkodina immersa
		Belodella triangularis
		Ligonodina magnidens
		Polygnathus normalis
		Polygnathus asymmetricus s.s.
		Ancyrognathus ioides
		Hibbardella (Diplododella) alternata
		Bryantodus nitidus
		Ancyrodella rotundiloba alata
		Polygnathus brevilaminus
		Neoprioiodus armatus

Fig. 32. Distribution chart of species in Section 7.

M(P)585

Gogo	Virgin Hills	FORMATION
19543	19542	SAMPLE NUMBER
19544	19541	
19545	19540	
19546	19539	
19547	19538	
19548	19537	
19549	19536	
19550	19535	
19551	19534	
19552	19533	
19553	19532	
19554	19531	
19555	19530	
19556	19529	
19557	19528	
19558	19527	
19559	19526	
19560	19525	
19561	19524	
19562	19523	
19563	19522	
19564	19521	
19565	19520	
19566	19519	
19567	19518	
19568	19517	
19569	19516	
19570	19515	
19571	19514	
19572	19513	
19573	19512	
19574	19511	
19575	19510	
19576	19509	
19577	19508	
19578	19507	
19579	19506	
19580	19505	
19581	19504	
19582	19503	
19583	19502	
19584	19501	
19585	19500	
19586	19499	
19587	19498	
19588	19497	
19589	19496	
19590	19495	
19591	19494	
19592	19493	
19593	19492	
19594	19491	
19595	19490	
19596	19489	
19597	19488	
19598	19487	
19599	19486	
19600	19485	
19601	19484	
19602	19483	
19603	19482	
19604	19481	
19605	19480	
19606	19479	
19607	19478	
19608	19477	
19609	19476	
19610	19475	
19611	19474	
19612	19473	
19613	19472	
19614	19471	
19615	19470	
19616	19469	
19617	19468	
19618	19467	
19619	19466	
19620	19465	
19621	19464	
19622	19463	
19623	19462	
19624	19461	
19625	19460	
19626	19459	
19627	19458	
19628	19457	
19629	19456	
19630	19455	
19631	19454	
19632	19453	
19633	19452	
19634	19451	
19635	19450	
19636	19449	
19637	19448	
19638	19447	
19639	19446	
19640	19445	
19641	19444	
19642	19443	
19643	19442	
19644	19441	
19645	19440	
19646	19439	
19647	19438	
19648	19437	
19649	19436	
19650	19435	
19651	19434	
19652	19433	
19653	19432	
19654	19431	
19655	19430	
19656	19429	
19657	19428	
19658	19427	
19659	19426	
19660	19425	
19661	19424	
19662	19423	
19663	19422	
19664	19421	
19665	19420	
19666	19419	
19667	19418	
19668	19417	
19669	19416	
19670	19415	
19671	19414	
19672	19413	
19673	19412	
19674	19411	
19675	19410	
19676	19409	
19677	19408	
19678	19407	
19679	19406	
19680	19405	
19681	19404	
19682	19403	
19683	19402	
19684	19401	
19685	19400	
19686	19399	
19687	19398	
19688	19397	
19689	19396	
19690	19395	
19691	19394	
19692	19393	
19693	19392	
19694	19391	
19695	19390	
19696	19389	
19697	19388	
19698	19387	
19699	19386	
19700	19385	
19701	19384	
19702	19383	
19703	19382	
19704	19381	
19705	19380	
19706	19379	
19707	19378	
19708	19377	
19709	19376	
19710	19375	
19711	19374	
19712	19373	
19713	19372	
19714	19371	
19715	19370	
19716	19369	
19717	19368	
19718	19367	
19719	19366	
19720	19365	
19721	19364	
19722	19363	
19723	19362	
19724	19361	
19725	19360	
19726	19359	
19727	19358	
19728	19357	
19729	19356	
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19731	19354	
19732	19353	
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19740	19345	
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19742	19343	
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19744	19341	
19745	19340	
19746	19339	
19747	19338	
19748	19337	
19749	19336	
19750	19335	
19751	19334	
19752	19333	
19753	19332	
19754	19331	
19755	19330	
19756	19329	
19757	19328	
19758	19327	
19759	19326	
19760	19325	
19761	19324	
19762	19323	
19763	19322	
19764	19321	
19765	19320	
19766	19319	
19767	19318	
19768	19317	
19769	19316	
19770	19315	
19771	19314	
19772	19313	
19773	19312	
19774	19311	
19775	19310	
19776	19309	
19777	19308	
19778	19307	
19779	19306	
19780	19305	
19781	19304	
19782	19303	
19783	19302	
19784	19301	
19785	19300	
19786	19299	
19787	19298	
19788	19297	
19789	19296	
19790	19295	
19791	19294	
19792	19293	
19793	19292	
19794	19291	
19795	19290	
19796	19289	
19797	19288	
19798	19287	
19799	19286	
19800	19285	
19801	19284	
19802	19283	
19803	19282	
19804	19281	
19805	19280	
19806	19279	
19807	19278	
19808	19277	
19809	19276	
19810	19275	
19811	19274	
19812	19273	
19813	19272	
19814	19271	
19815	19270	
19816	19269	
19817	19268	
19818	19267	
19819	19266	
19820	19265	
19821	19264	
19822	19263	
19823	19262	
19824	19261	
19825	19260	
19826	19259	
19827	19258	
19828	19257	
19829	19256	
19830	19255	
19831	19254	
19832	19253	
19833	19252	
19834	19251	
19835	19250	
19836	19249	
19837	19248	
19838	19247	
19839	19246	
19840	19245	
19841	19244	
19842	19243	
19843	19242	
19844	19241	
19845	19240	
19846	19239	
19847	19238	
19848	19237	
19849	19236	
19850	19235	
19851	19234	
19852	19233	
19853	19232	
19854	19231	
19855	19230	
19856	19229	
19857	19228	
19858	19227	
19859	19226	
19860	19225	
19861	19224	
19862	19223	
19863	19222	
19864	19221	
19865	19220	
19866	19219	
19867	19218	
19868	19217	
19869	19216	
19870	19215	
19871	19214	
19872	19213	
19873	19212	
19874	19211	
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19878	19207	
19879	19206	
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19882	19203	
19883	19202	
19884	19201	
19885	19200	
19886	19199	
19887	19198	
19888	19197	
19889	19196	
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19892	19193	
19893	19192	
19894	19191	
19895	19190	
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19898	19187	
19899	19186	
19900	19185	
19901	19184	
19902	19183	
19903	19182	
19904	19181	
19905	19180	
19906	19179	
19907	19178	
19908	19177	
19909	19176	
19910	19175	
19911	19174	
19912	19173	
19913	19172	
19914	19171	
19915	19170	
19916	19169	
19917	19168	
19918	19167	
19919	19166	
19920	19165	
19921	19164	
19922	19163	
19923	19162	
19924	19161	
19925	19160	
19926	19159	
19927	19158	
19928	19157	
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19930	19155	
19931	19154	
19932	19153	
19933	19152	
19934	19151	
19935	19150	
19936	19149	
19937	19148	
19938	19147	
19939	19146	
19940	19145	
19941	19144	
19942	19143	
19943	19142	
19944	19141	
19945	19140	
19946	19139	
19947	19138	
19948	19137	
19949	19136	
19950	19135	
19951	19134	
19952	19133	
19953	19132	

Gogo	Virgin Hills	FORMATION
Upper Pol. asymm.	Ancyrognathus triangularis	CONODONT ZONE
19577 19578 19579 19580 19581 19582 19583 19584 19585	SAMPLE NUMBER / SPECIES	
-----		Polygnathus australis
----		Icriodus alternatus cymbiformis
----		Polygnathus seddoni
----		Polygnathus asymmetricus ovalis
-----	-----	Palmatolepis unicornis
-----	-----	Ancyrodella lobata
-----	-----	Polygnathus cf. P. webbi
-----	-----	Bryantodus typicus
-----	-----	Bryantodus nitidus
-----	-----	Ozarkodina immersa
-----	-----	Palmatolepis subrecta
-----	-----	Ancyrodella nodosa
-----	-----	Polygnathus xylus
-----	-----	Icriodus alternatus s.s.
-----	-----	Nothognathella abbreviata
-----	-----	Ozarkodina macra
-----	-----	Lonchodina arcuata
-----	-----	Hindeodella subtilis
-----	-----	Synprioniodina cf. S. alternata
-----	-----	Palmatodella delicatula
-----	-----	Lonchodina sp. nov. A
-----	-----	Ancyrodella buckeyensis
-----	-----	Ancyrodella ioides
-----	-----	Neoproniodus armatus
-----	-----	Lonchodina perlonga
-----	-----	Ligonodina panderi
-----	-----	Falcodus guntharii
-----	-----	Nothognathella abnormis
-----	-----	Nothognathella brevidonta
-----	-----	Enantiognathus lipperti
-----	-----	Hindeodella compressa
-----	-----	Hibbardella (Diplododella) alternata

Fig. 34. Distribution chart of species in Section 12.

Virgin Hills					FORMATION
					SAMPLE NUMBER
Palmatolepis crepida	Palm. rhomboides	Palmatolepis		quadrantinodosa	CONODONT ZONE
Upper		Lower	Upper	SPECIES	
21282					Palmatolepis quadrantinodosa lobata
21281					Palmatolepis subperlobata
21280					Palmatolepis glabra s.s.
21279					Palmatolepis minuta s.s.
21278					Belodella erecta
21277					Belodella resima
21276					Icriodus alternatus costatus
21275					Polygnathus brevilaminus
21274					Polygnathus germanus s.s.
21273					Tripodellus robustus
21272					Prioniodina? smithi
21271					Palmatolepis minuta loba
21270					Polygnathus normalis
21269					Bryantodus macrodentatus
21268					Bryantodus nitidus
21267					Ozarkodina immersa
21266					Falcodus aculeatus
21265					Hindeodella compressa
21264					Hindeodella subtilis
21263					Ozarkodina homoarciata
21262					Polygnathus glaber s.s.
21261					Scutula bipennata
21260					Acodina sp. nov. A
21259					Palmatolepis quadrantinodosa inflexoidea
21258					Polygnathus pennatus
21257					Synprioniodina cf. S. alternata
21256					Polygnathus delicatulus
21255					Polygnathus triphyllatus
21254					Palmatolepis glabra elongata
21253					Palmatolepis glabra acuta
21252					Palmatolepis glabra pectinata
21251					Palmatolepis quadrantinodosa marginifera
21250					Polylophodonta confluens
21249					Nothognathella falcata
21248					Falcodus variabilis
21247					Palmatodella delicatula
21246					Hindeodella corpulenta
21245					Palmatolepis perlobata
21244					Apatognathus sp. A
21243					Ligonodina panderi
21242					Ozarkodina lacera
21241					Polygnathus cf. P. norrisi
21240					Falcodus sp. nov. A

M(P)589

Fig. 36. Distribution chart of species in Section 25.

