

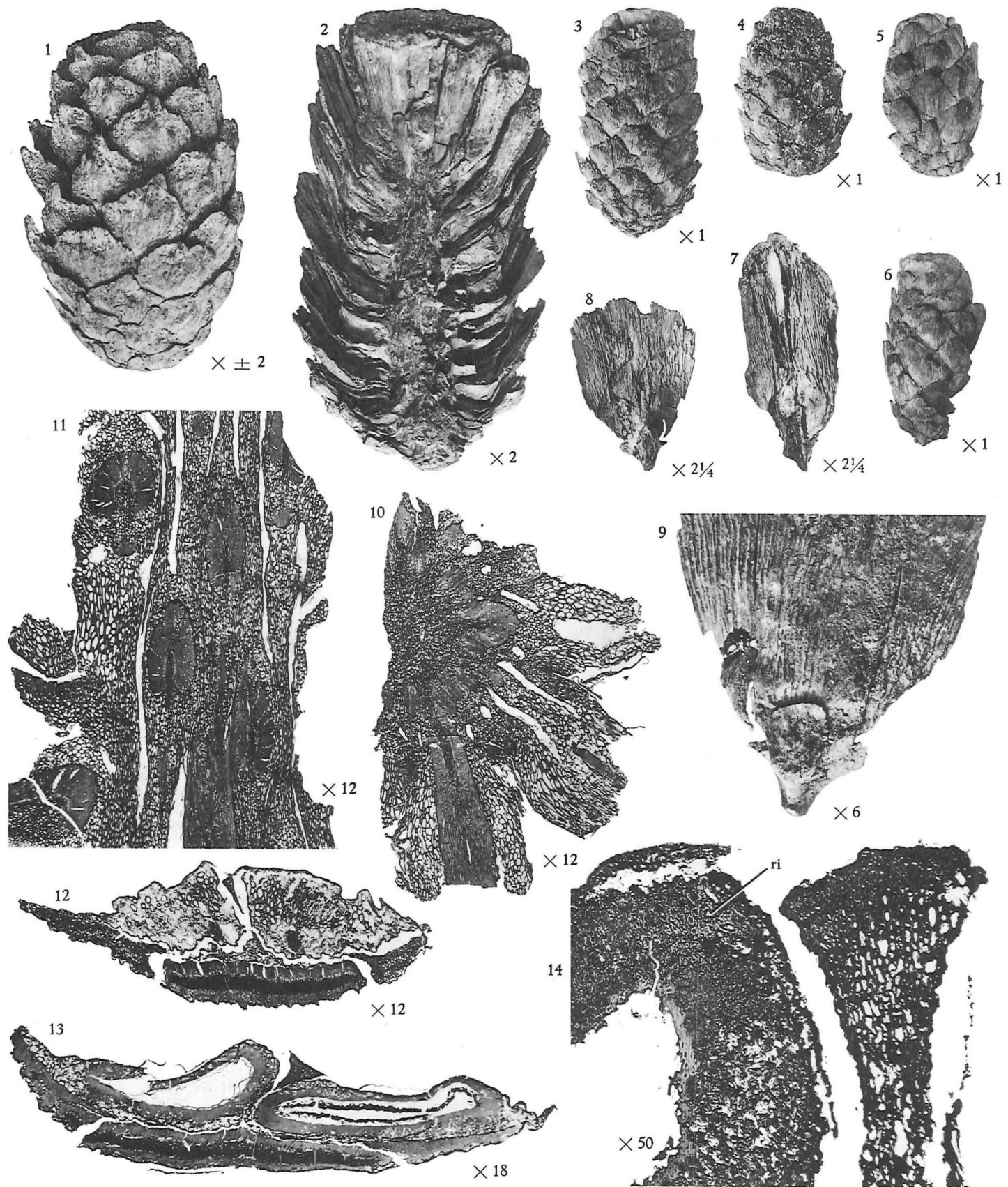
**PLATE I**

EXPLANATION OF PLATE I.

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*Pseudoaraucaria gibbosa* (COEMANS) n. comb.

- FIG. 1. — Almost intact come showing the terminal tooth-like umbos. After BOMMER.  $\times 2$  (approx.).
- FIG. 2. — Cone with some of the scales removed.  $\times 2$ .
- FIG. 3-6. — Cones.  $\times 1$ . (Fig. 4 and 3 show the reverse sides of the specimens in fig. 1 and 2, respectively.) All specimens from Houdeng-Aimeries.
- FIG. 7. — Scale somewhat laterally compressed with the seeds in situ.  $\times 2\frac{1}{4}$ .
- FIG. 8. — Scale with the seeds removed; (incomplete distally).  $\times 2\frac{1}{4}$ .
- FIG. 9. — Abaxial side of the lower part of a scale showing the bract.  $\times 6$ .
- FIG. 10. — Part of the axis in transverse section, showing the pith, vascular system, cortex with resin canals and three scale-bases. F3/4/10.  $\times 12$ .
- FIG. 11. — Part of a tangential longitudinal section through the axis, showing the horseshoe-shaped scale traces and associated bract traces below. F5/3/8.  $\times 12$ .
- FIG. 12. — Transverse section of a scale passing through the chalazal cushions of the seeds. F1/8/14.  $\times 12$ .
- FIG. 13. — Transverse section of another scale (more compressed) passing through the middle of the seeds. F2/5/5.  $\times 18$ .
- FIG. 14. — Part of a seed and the interseminal ridge in transverse section. F1/4/4.  $\times 50$ . *ri*, one of the two sclerotic ribs of the integument.
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PLATE II

EXPLANATION OF PLATE II.

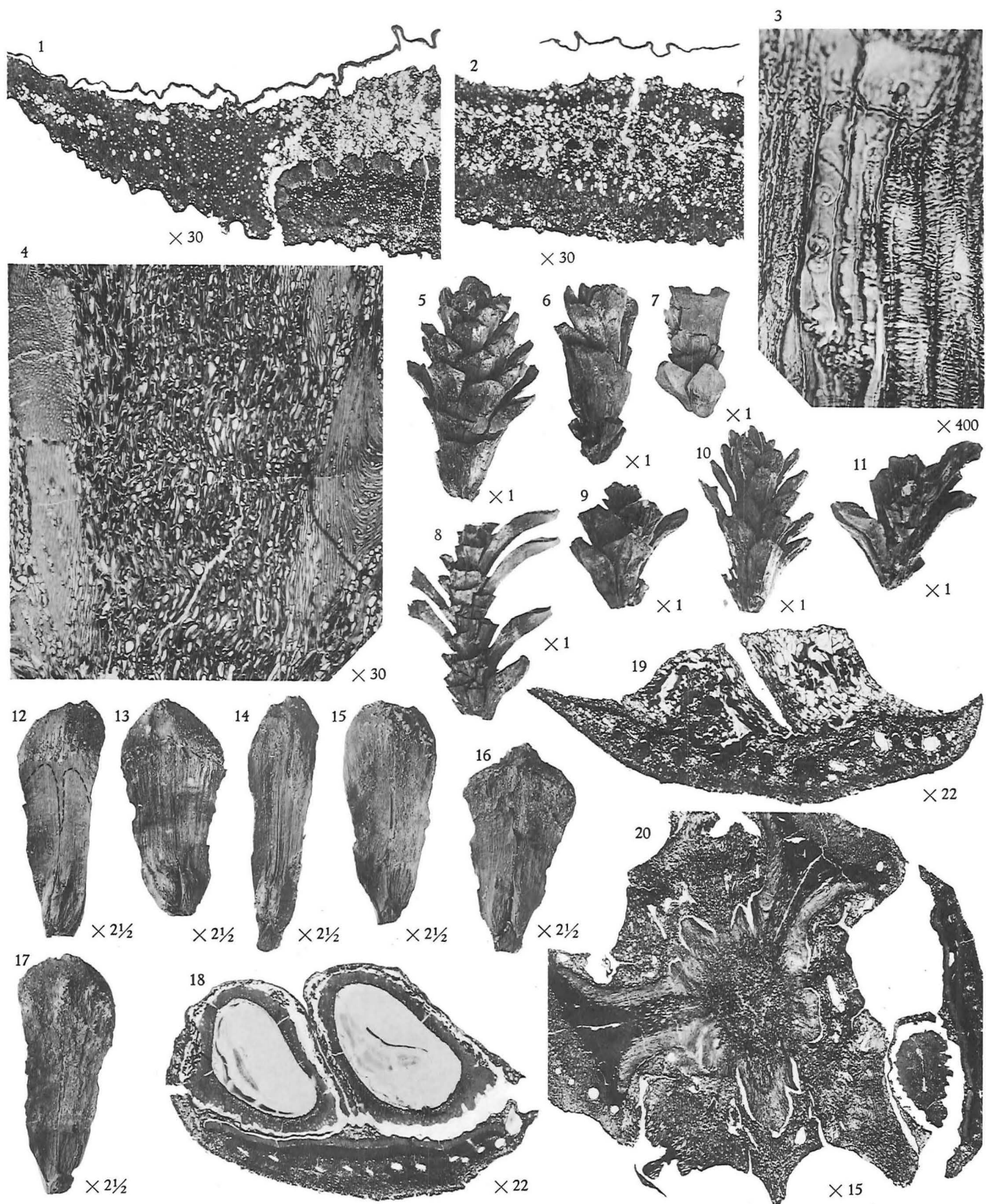
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*Pseudoaraucaria gibbosa* (COEMANS) n. comb.

- FIG. 1. — Part of a transverse section of the scale just above the seeds showing the seed-wing and the lateral sclerotic tissue of the scale. F1/12/5. ×30.
- FIG. 2. — Similar section at a higher level showing two continuous bands of sclerenchyma. F1/17/6. ×30.
- FIG. 3. — Small part of the wood in radial L.S., showing a uniseriately pitted tracheid. F4/5/8. ×400.
- FIG. 4. — Raadial L.S. of cone-axis showing uniform pith. F4/5/4. ×30.

*Pityostrobus haurageanus* n. sp.

- FIG. 5-11. — Selection of cone fragments. All ×1. (Fig. 5 shows the Type-Specimen.)
- FIG. 12-17. — Scales. All ×2½. (In fig. 15 and 17, the seeds are not present.)
- FIG. 18. — Transverse section of a scale passing through the seeds. G1/3/13. ×22.
- FIG. 19. — A more distal section passing through the chalazal cushions of the seeds. G1/6/14. ×22.
- FIG. 20. — Transverse section of the cone-axis. G2/9/10. ×15.
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PLATE III

EXPLANATION OF PLATE III.

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*Pseudoaraucaria gibbosa* (COEMANS) n. comb.

FIG. 1. — A typical isolated cone-axis, completely decorticated at the top, elsewhere with somewhat abraded scale bases.  $\times 2\frac{1}{2}$ .

*Pityostrobus hautrageanus* n. sp.

FIG. 2. — Part of a transverse section of a scale in the distal region showing the small, rounded vascular strands and the seed-wing in close contact with the adaxial fibrous tissue. G1/13/9.  $\times 70$ .

FIG. 3. — Part of the chalazal tissue of the seed in transverse section. G1/7/7.  $\times 78$ .

FIG. 4. — Part of the testa in transverse section. G1/3/12.  $\times 108$ .

FIG. 5. — Pith in longitudinal section. G3/10/3.  $\times 78$ .

*Pityostrobus soigniesiensis* n. sp.

FIG. 6. — Cone. (Type-Specimen.)  $\times 2$ .

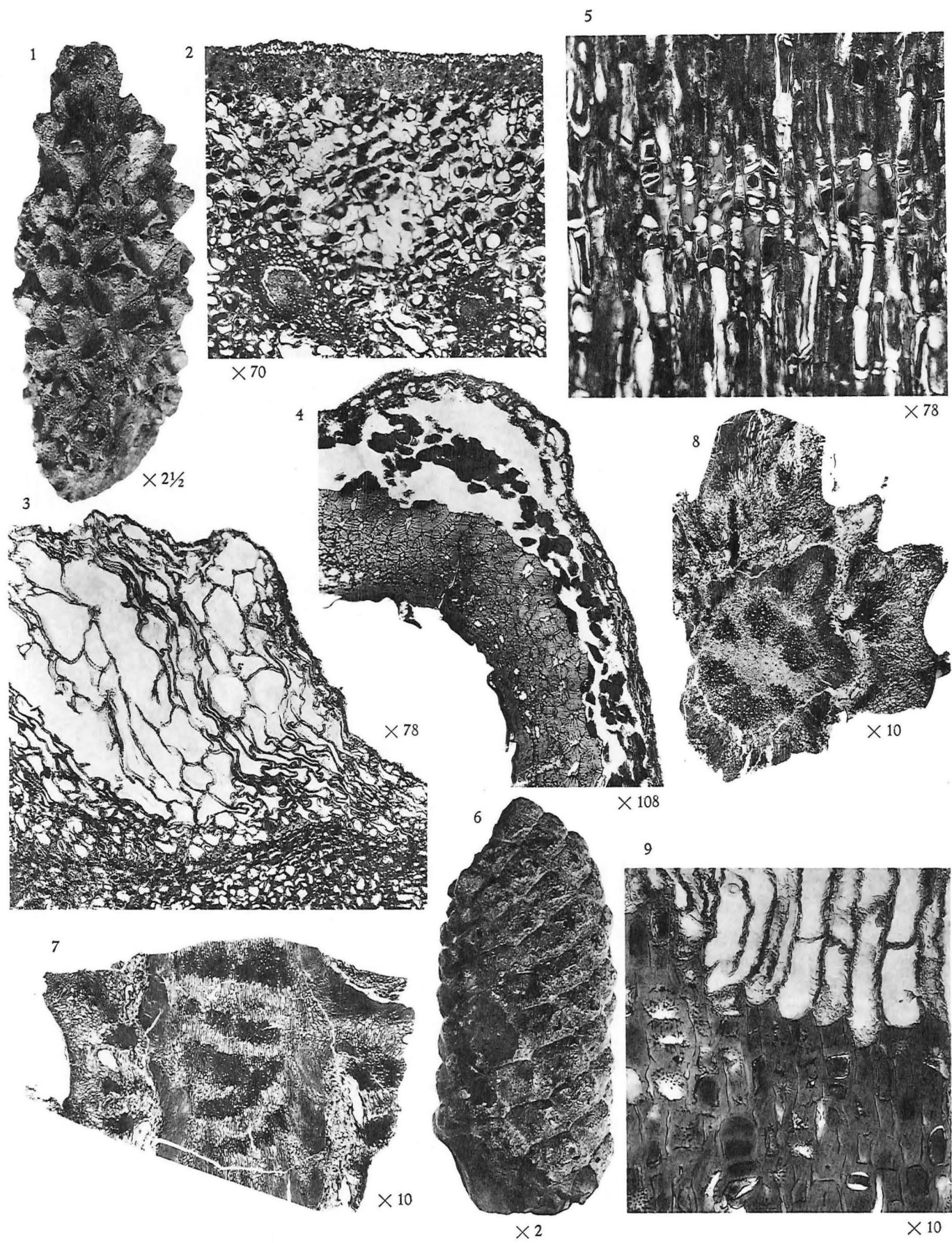
FIG. 7. — Longitudinal section of the axis. H2/5/4.  $\times 10$ .

FIG. 8. — Transverse section of the axis. H3/5/9.  $\times 10$ .

FIG. 9. — Pith in longitudinal section. H2/5/5.  $\times 10$ .

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PLATE IV

*Handwritten text, possibly a list or index, running vertically down the left margin.*

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EXPLANATION OF PLATE IV.

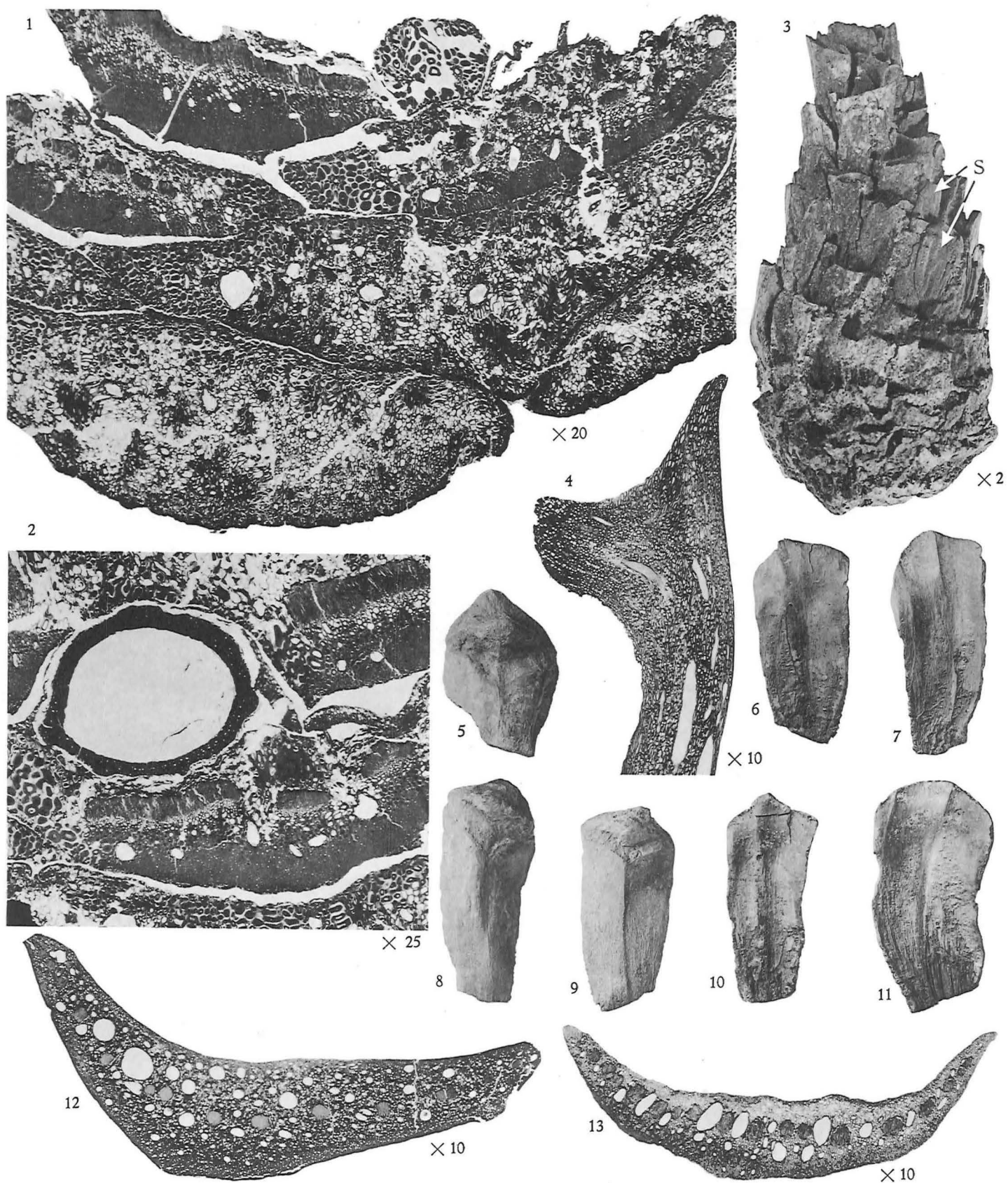
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*Pityostrobus soigniesiensis* n. sp.

- FIG. 1. — Part of a transverse section of the cone showing scales cut at various levels. H1/5/13.  $\times 20$ .  
FIG. 2. — Oblique transverse section through the base of a scale with only one of the seeds cut; the section goes through the wing of the other seed. H1/3/4.  $\times 25$ .

*Pinus belgica* n. sp.

- FIG. 3. — Cone. The upper parts of the scales are broken off, but a few seeds are still in situ (*s*).  $\times 2$ .  
(Type-Specimen)  
FIG. 4. — Median longitudinal section through the upper part of a scale. J5/3/4.  $\times 10$ .  
FIG. 5-11. — Scales; some seen abaxially, others adaxially. Fig. 7 and 8, 6 and 9 represent the two sides of the same specimens.  
FIG. 12. — Transverse section of the scale shown in fig. 11, passing through the upper region. J1/5/10.  $\times 10$ .  
FIG. 13. — Similar section through the middle region. J/3/12.  $\times 10$ .
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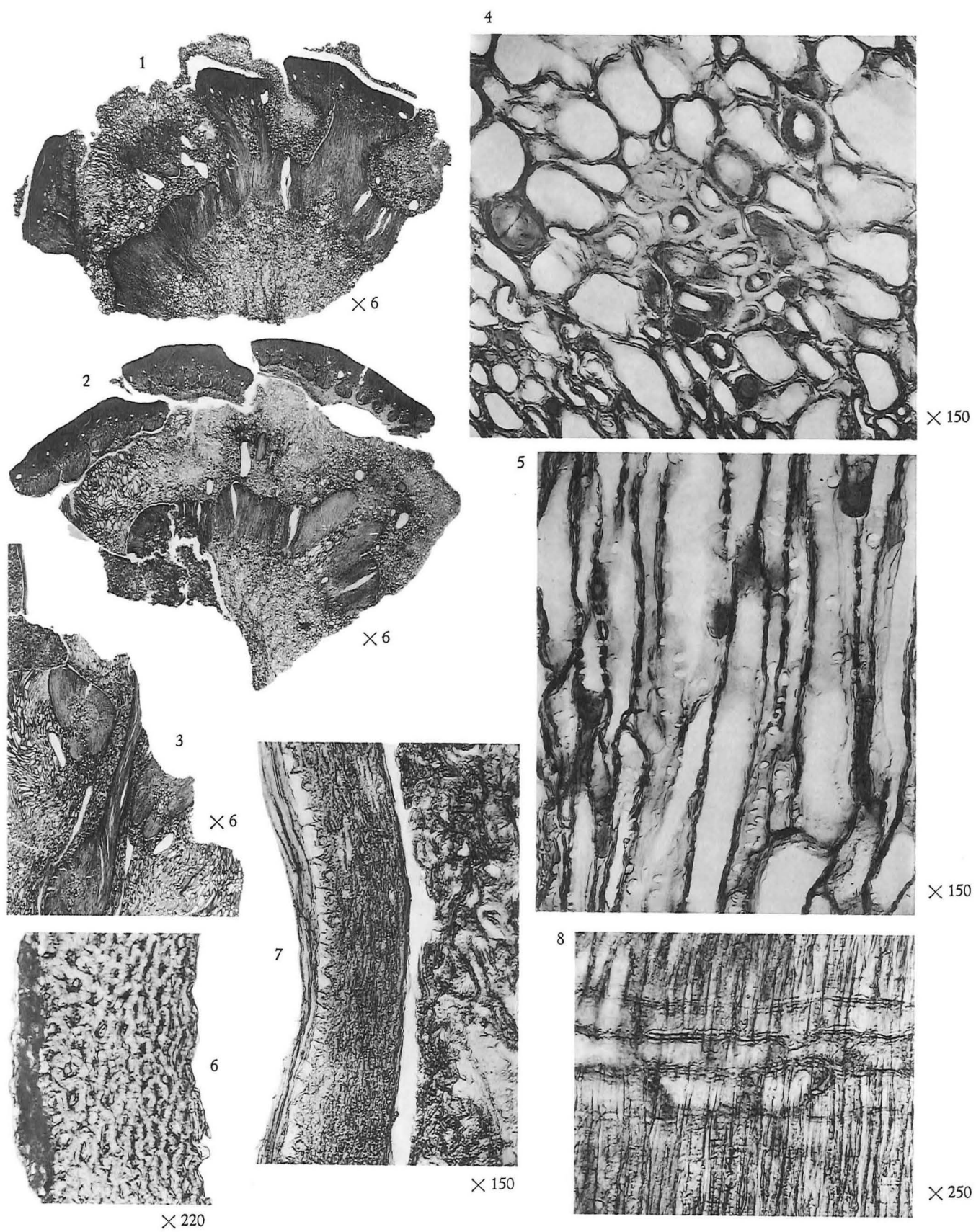
PLATE V

EXPLANATION OF PLATE V.

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*Pinus belgica* n. sp.

- FIG. 1. — Transverse section of the axis. J2/5/1. × 6.
- FIG. 2. — Transverse section of the axis. J2/10/1. × 6.
- FIG. 3. — Tangential longitudinal section through the cortex showing the scale and bract traces. J4/4/2. × 6.
- FIG. 4. — Transverse section of the pith showing a nest of thick-walled cells. J2/4/4. × 150.
- FIG. 5. — Longitudinal section of the pith. J4/1/3. × 150.
- FIG. 6. — Transverse section of the sclerotesta. J6/2/6. × 220.
- FIG. 7. — Longitudinal section of the testa. J3/4/3. × 150.
- FIG. 8. — Part of the wood of the axis in radial longitudinal section. × 250.
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PLATE VI



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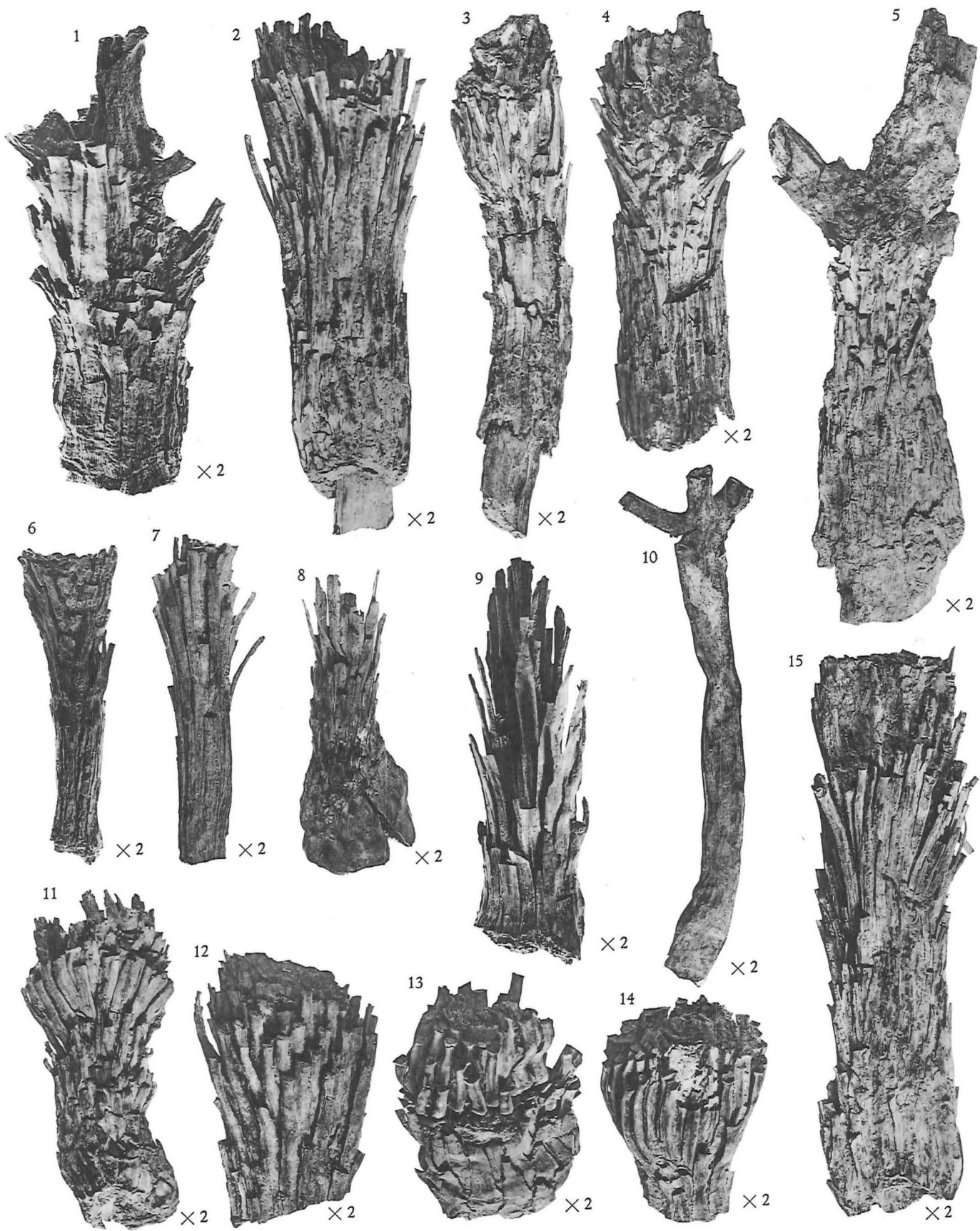
EXPLANATION OF PLATE VI.

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***Prepinus sclerophylla* n. sp.**

A selection of specimens. The one in figure 15 is chosen as the Type-Specimen. All  $\times 2$ . All from Bernissart.

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**PLATE VII**

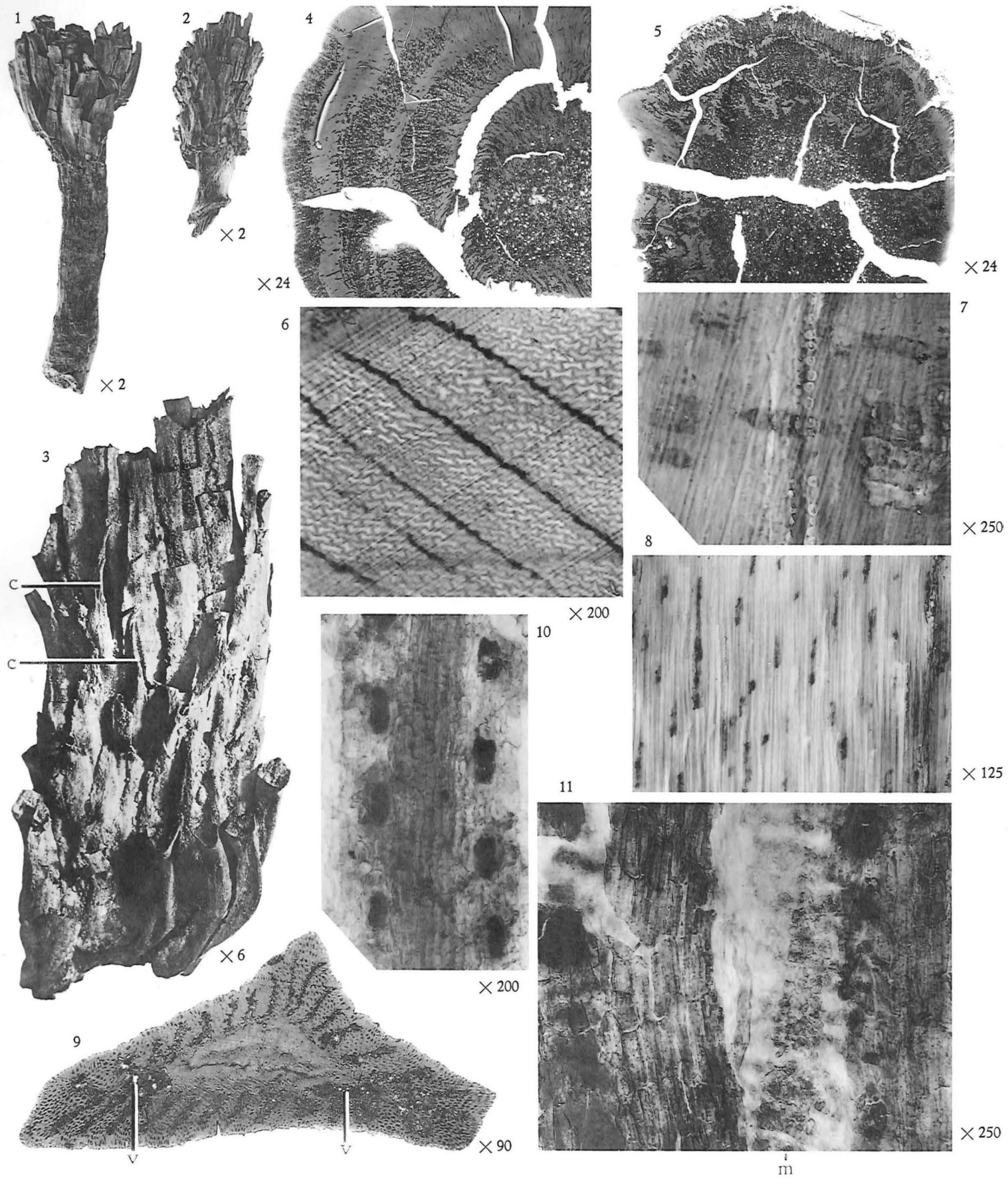
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EXPLANATION OF PLATE VII.

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*Prepinus sclerophylla* n. sp.

- FIG. 1 and 2. — Partly decorticated specimens.  $\times 2$ . Bernissart.
- FIG. 3. — Specimen showing attenuated tips of two cataphylls (*c*).  $\times 6$ . Bernissart.
- FIG. 4. — Transverse section of the woody cylinder shown in text-figure 5, B (from specimen in figure 2 on this plate) taken below the swelling. L6a/2.  $\times 24$ .
- FIG. 5. — Transverse section of the same from above the swelling showing considerably less wood. L6b/1/3.  $\times 24$ .
- FIG. 6. — Wood in transverse section. L4/1/5.  $\times 200$ .
- FIG. 7. — Wood in radial longitudinal section. L5/2/5.  $\times 250$ .
- FIG. 8. — Wood in tangential longitudinal section. L5/1/4.  $\times 125$ .
- FIG. 9. — Transverse section of a leaf. *v*, resin canals. L1/6/7.  $\times 90$ .
- FIG. 10. — Part of the leaf epidermis showing stomata. The dark band between the stomatal rows represents a bundle of hypodermal fibres. From a macerated specimen. L11b.  $\times 200$ .
- FIG. 11. — Portion of a macerated leaf showing, through a rupture in the epidermis, part of the mesophyll (*m*). L11c.  $\times 250$ .
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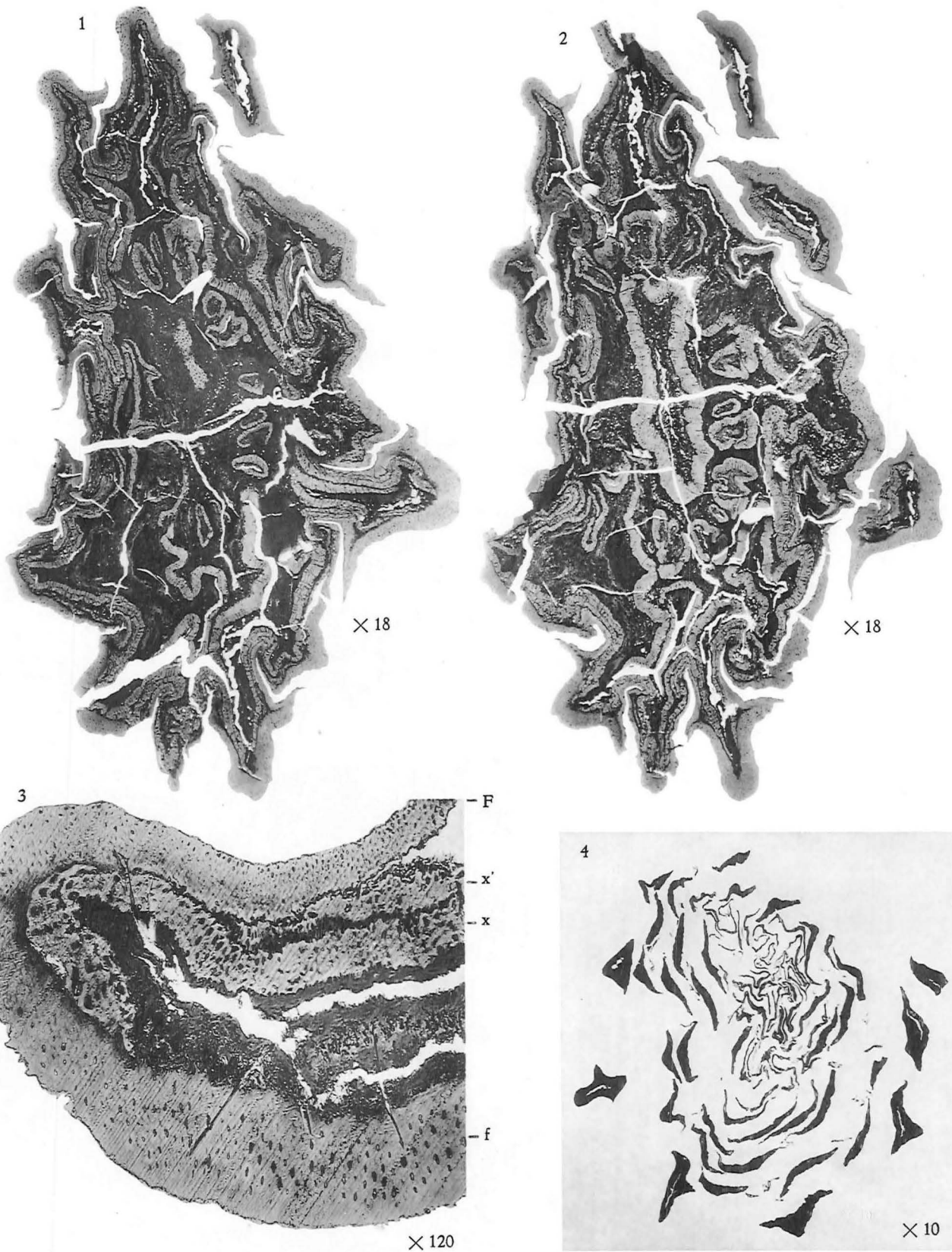
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EXPLANATION OF PLATE VIII.

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*Prepinus sclerophylla* n. sp.

- FIG. 1 and 2. -- Transverse sections (nearly 1 mm apart) of a slender shoot similar to that shown in figure 7, plate VI, showing leaf-bases and the elaborate system of vascular strands. The higher section (fig. 2) shows a continuous central cylinder, but this fades out downwards and is represented in figure 1 by the small dumb-bell-shaped patch slightly above the centre. L13/3/12 and L13/4/3.  $\times 18$ .
- FIG. 3. — Transverse section of a leaf just above the base showing the thick sheath of fibrous tissue (*f*) and the broad xylem band apparently divided tangentially into two portions (*x* and *x'*). L13/4/5.  $\times 120$ .
- FIG. 4. — Transverse section through the apex of the same shoot as in figures 1 and 2, showing a mass of spirally arranged cataphylls (probably bud scales) surrounded by a few of the uppermost needle-leaves. L14/5/4.  $\times 10$ .
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PLATE IX



EXPLANATION OF PLATE IX.

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*Abiocalis verticillatus* n. sp.

FIG. 1. — The type-specimen. ×1.

FIG. 2-6. — Other specimens. ×2.

FIG. 7. — Short portion of an axis with the persistent scales of a lateral bud. ×2.

FIG. 8. — A terminal bud. ×2.

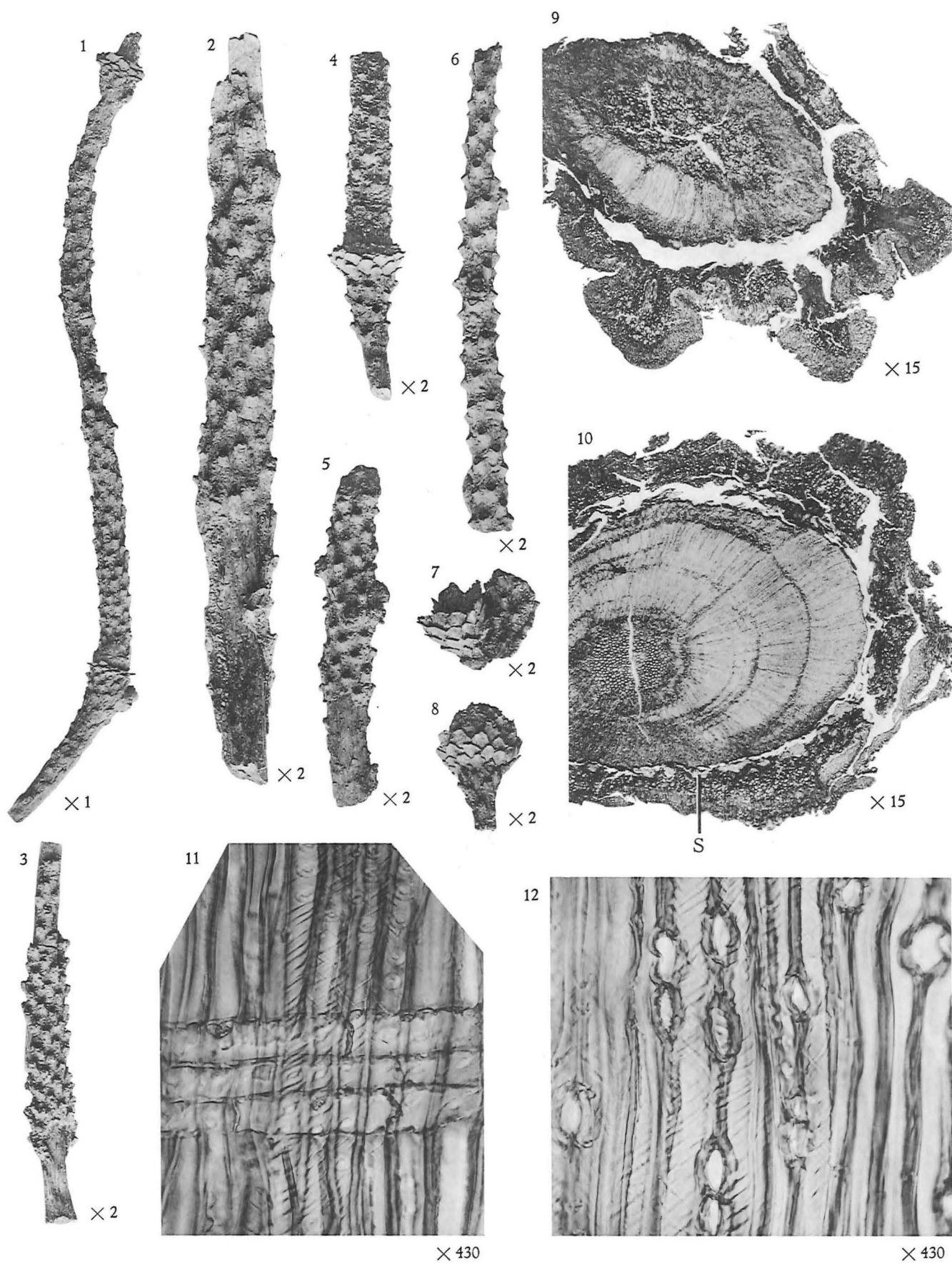
FIG. 9. — Transverse section of the type-specimen taken a short distance above the lower terminal bud scar; this portion of the twig is shown to be in its second year. K1/6/9. ×15.

FIG. 10. — Similar section taken below the lower terminal bud scar (i.e. in the third-year portion).  
s, sclereids. K3/4/1. ×15.

FIG. 11. — Radial longitudinal section of the wood. K4a/1. ×430.

FIG. 12. — Tangential longitudinal section of the wood. K2/2/12. ×430.  
(Figures 1-8 are from photographs by CH. BOMMER.)

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PLATE X

EXPLANATION OF PLATE X.

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*Abiocalis verticillatus* n. sp.

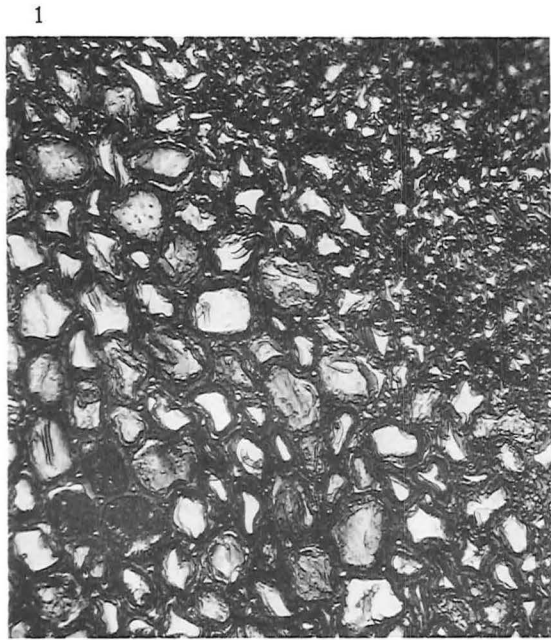
- FIG. 1. — Pith in transverse section. (Fungal hyphae are visible in some of the cells.) K3/1/6. ×165.  
FIG. 2. — Pith in longitudinal section. K5/7/4. ×165.  
FIG. 3. — Part of the cortex from the third-year portion of the type-specimen showing the dark periderm cells;  $p_1$  and  $p_2$  are the first and second phellogens. K3/4/6. ×120.

*Elatocladus simplex* n. sp.

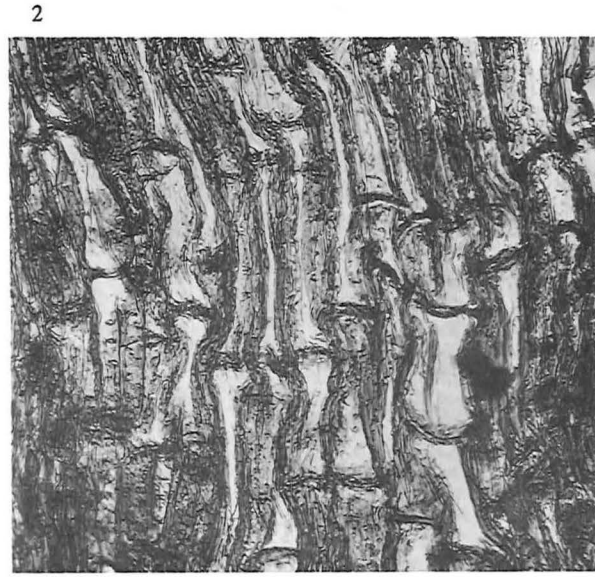
- FIG. 4. — Median longitudinal section showing the large-celled endodermis, the mesophyll (palisade on the left) and the hypodermal fibrous tissue. K'4/1/14. ×145.  
FIG. 5. — Transverse section (middle region). K'2/2/12. ×145.

*Pityostrobus villerotensis* ALVIN.

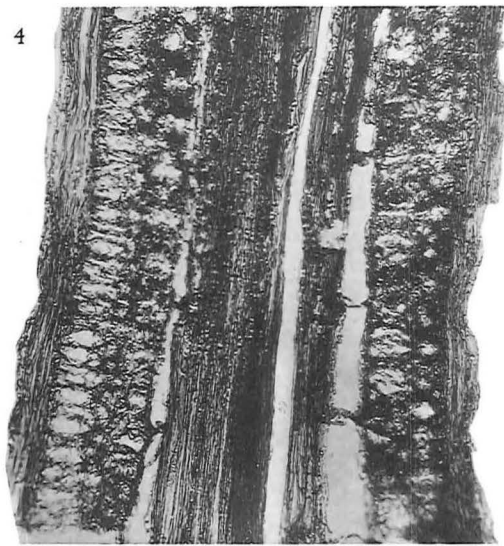
- FIG. 6. — Specimen in situ in dry clay matrix: the specimen has shrunk considerably more than the matrix. ×1.
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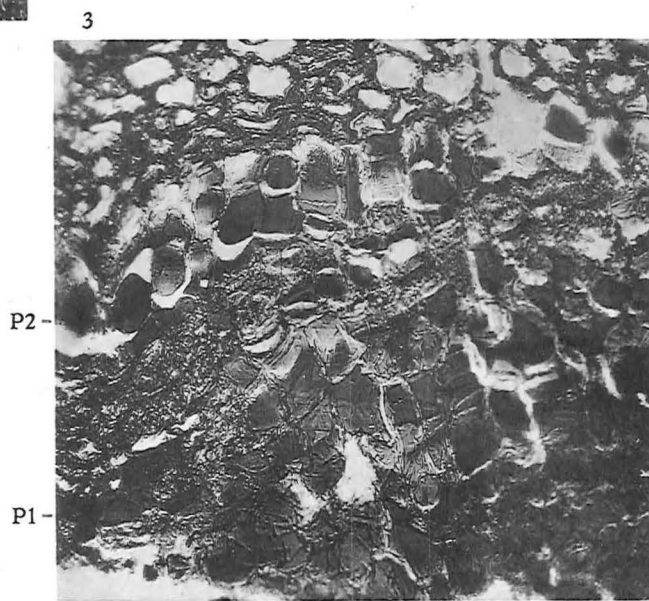
× 165



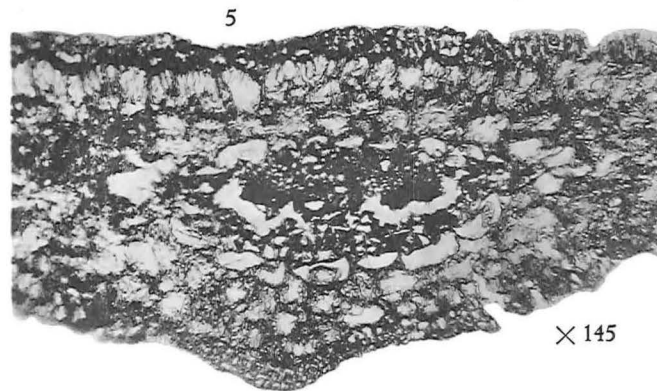
× 165



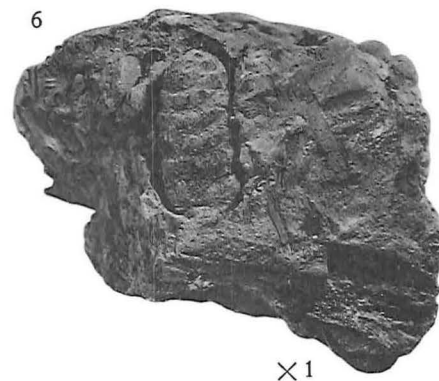
× 145



× 120



× 145



× 1

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