


Danmarks geologiske Undersøgelse.  
II. Række. No. 48.

---

Stratigraphical and Paleontological  
Studies  
of  
Interglacial Fresh-water Deposits  
in  
Jutland and Northwest Germany

By  
Knud Jessen and V. Milthers.

Atlas.



København.  
I Kommission hos C. A. Reitzel  
(Indeh. Axel Sandal).  
1928.

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<i>Acer campestre</i> .....	XXXI. 17—21
— <i>platanoides</i> .....	XXXI. 22
<i>Betula nana</i> .....	XXXV. 9—14, 16—18
— — $\times$ <i>pubescens</i> .....	XXXV. 15, 19—20
— <i>pendula</i> .....	XXXV. 1 5
— <i>cf. pendula</i> $\times$ <i>pubescens</i> .....	XXXV. 6
— <i>pubescens</i> .....	XXXV. 7—8
<i>Carex caespitosa</i> .....	XXXV. 21—22
— <i>pseudocyperus</i> .....	XXXV. 25
— <i>sp.</i> .....	XXXV. 23—24
<i>Ceratophyllum demersum</i> .....	XXXI. 23—25
— — <i>var. apiculatum</i> .....	XXXI. 26—28
— <i>submersum</i> .....	XXXI. 29—32
<i>Eriophorum vaginatum</i> .....	XXXII. 10—12
<i>Hypochoeris radicata</i> .....	XXXII. 1
<i>Litorella uniflora</i> .....	XXXII. 8—9
<i>Montia lamprosperma</i> .....	XXXII. 7
<i>Myosoton aquaticum</i> .....	XXXII. 15
<i>Myriophyllum alterniflorum</i> .....	XXXII. 4—6
— <i>verticillatum</i> .....	XXXII. 2—3
<i>Najas flexilis</i> .....	XXXIII. 6—9
<i>Nasturtium aquaticum</i> .....	XXXV. 26—28
<i>Oenanthe sp.</i> .....	XXXII. 20.
<i>Cf. Origanum vulgare</i> .....	XXXIV. 10—11
<i>Oxycoccus palustris</i> .....	XXXII. 13—14
<i>Potamogeton alpinus</i> .....	XXXIII. 14—16
— <i>densus</i> .....	XXXII. 22
— <i>filiformis</i> .....	XXXIII. 10—11

<i>Potamogeton natans</i> .....	XXXII. 27—28
— <i>praelongus</i> .....	XXXIII. 12—13
— <i>pusillus</i> .....	XXXIII. 17—20
— <i>trichoides</i> .....	XXXII. 23—26
<i>Ranunculus lingua</i> .....	XXXII. 16—18
<i>Rhynchospora alba</i> .....	XXXII. 21
<i>Salix herbacea</i> .....	XXXIV. 1—3
— <i>phylicifolia</i> .....	XXXIV. 5—6
— <i>cf. repens</i> .....	XXXIV. 7—8
— <i>reticulata</i> ..	XXXIV. 9
<i>Scleranthus perennis</i> ? .....	XXXII. 19
<i>Sparganium affine</i> .....	XXXIII. 26—31
— <i>minimum</i> .....	XXXIII. 22—25
— <i>simplex</i> .....	XXXIII. 21
<i>Tilia platyphylla</i> .....	XXXIII. 1—5
<i>Trapa natans</i> .....	XXXI. 1—16.
<i>Trichocolea tomentella</i> .....	XXXV. 29—30

Plate I.

## Plate I.

Map showing the position of the principal interglacial fresh-water deposits in Jutland, Funen and adjacent islands. The limit of last glaciation is marked on the map.

1. Deposits of the Brörup type and of the Herning Type. Last interglacial period. Nos. 1—29.

2. Fresh-water deposits occurring in conjunction with the dislocated Eem strata. Last interglacial period. Nos. 30—36.

3. Deposits from the penultimate interglacial period. Nos. 37—41.

4. Interglacial fresh-water deposits covered by formations from the last glaciation. Nos. 42—55.

### The Interglacial Localities.

- |                        |                          |                 |
|------------------------|--------------------------|-----------------|
| 1. Herning Brickworks. | 21. Lervad.              | 37. Rind.       |
| 2. Tiphede.            | 22. The Brörup-district, | 38. Harreskov.  |
| 3. Solsö.              | see Fig. 2, p. 63 in the | 39. Starup.     |
| 4. Herborg I.          | text.                    | 40. Tirslund.   |
| 5. Herborg II.         | 23. Spandet.             | 41. Vejen.      |
| 6. Astrup.             | 24. Over Gestrup.        |                 |
| 7. Duedam I.           | 25. Agerskov.            | 42. Hörup.      |
| 8. Duedam II.          | 26. Two bogs in          | 43. Lövskal II. |
| 9. Dalager Nygaard.    | 27. Emmerlev Cliff.      | 44. Lövskal I.  |
| 10. Dalager.           | 28. Mögeltönder.         | 45. Hollerup.   |
| 11. Sandfeld.          | 29. Westerland on Sylt.  | 46. Vellev.     |
| 12. Grönmose.          |                          | 47. Rostrup.    |
| 13. Ringdal.           | 30. Stensigmose Cliff.   | 48. Vejle.      |
| 14. Rodebæk I.         | 31. Mommark.             | 49. Egtved.     |
| 15. Rodebæk II.        | 32. Horne Næs.           | 50. Trelde Næs. |
| 16. Rodebæk III.       | 33. Bregninge Cliff.     | 51. Fredericia. |
| 17. Höllund Sögaard.   | 34. Risemark Cliff.      | 52. Kolding.    |
| 18. Bramminge.         | 35. Vejsnæs Nakke.       | 53. Ejstrup.    |
| 19. Lundtofte.         | 36. Ristinge Cliff.      | 54. Kollund.    |
| 20. Fövling.           |                          | 55. Frausing.   |

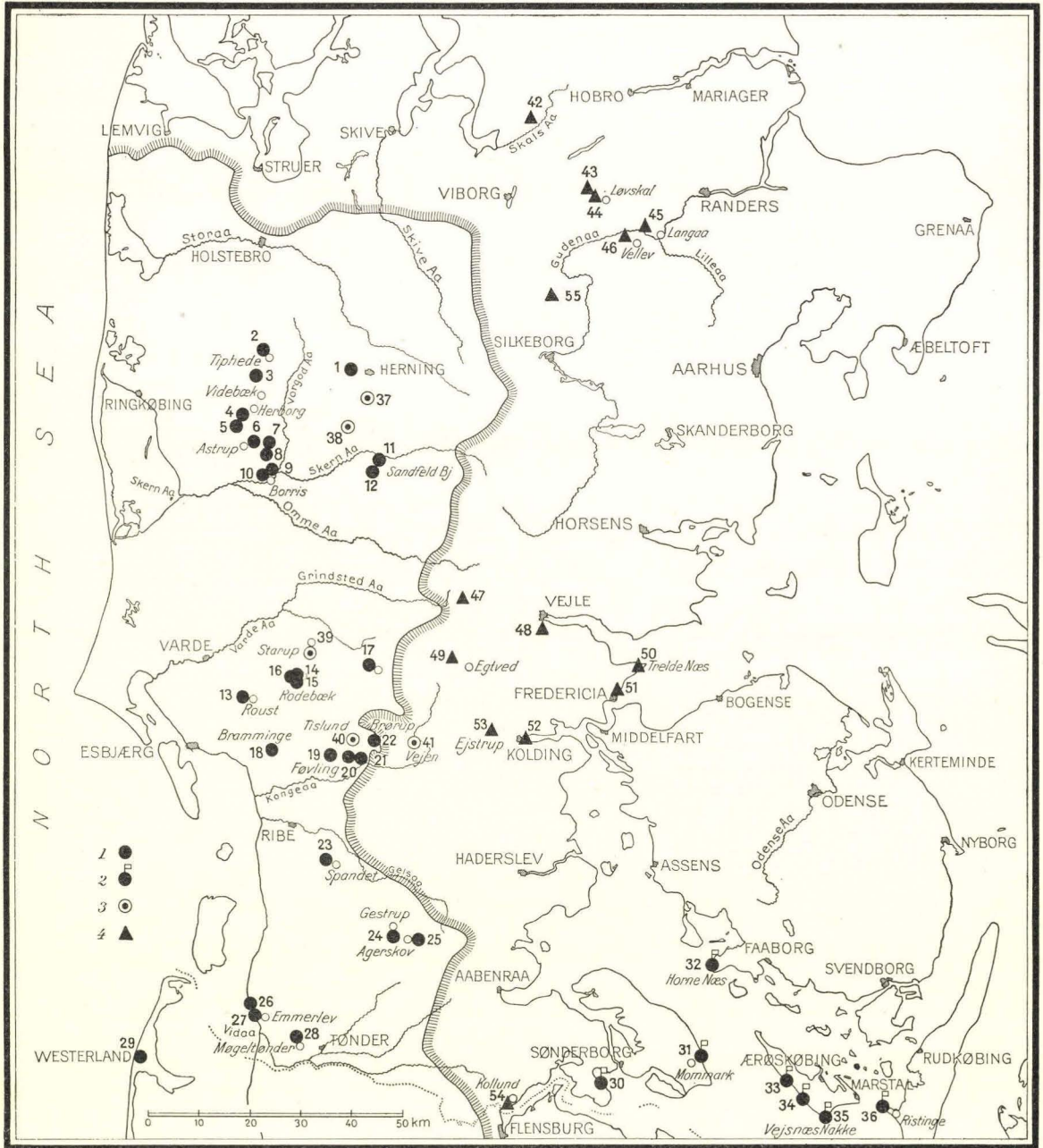




Plate II.

## Plate II.

Map of the interglacial lake at Herning Brickworks, showing position of the borings, with their height above sea level. A—A longitudinal, B—B transverse section through the interglacial lake deposits, cf. Plates VIII and IX. Contour interval 0.5 m.

### The Counterdraw.

- · — · — Limit of the Lower mud bed K<sub>2</sub>.
- · — · — — — Upper — G.
- △ △ △ Moraine clay forming the eastern side of the lake basin.
- └ └ └ Stoneless clay forming the western side of the lake basin.

# MAP OF THE INTERGLACIAL LAKE AT HERNING BRICKWORKS

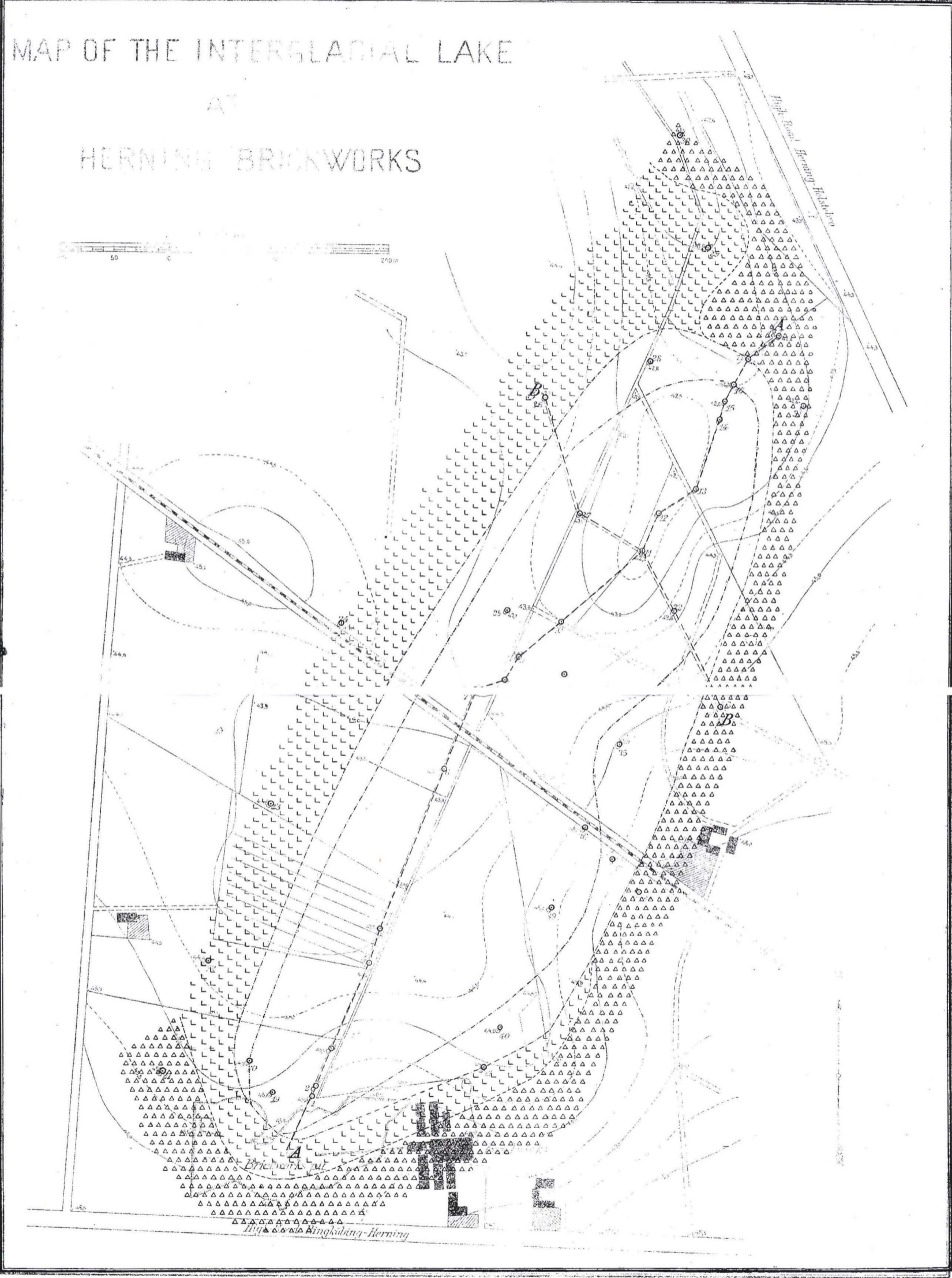


Plate III.

### Plate III.

Profile of the western wall of the clay pit at Herning Brickworks 1914. Southernmost part of the profile line A—A, see Pl. II and VIII. South to the left.

- |   |  |
|---|--|
| A. Mould.   | K <sub>1</sub> . Light-coloured Sand.  |
| B. Wind-blown Sand.                                     | K <sub>2</sub> . Mud-blended Sand (the <i>Trapa</i><br>and <i>Ceratophyllum</i> beds). |
| D. Stony Sand.  | L. Arctic Clay.  |
| E. Yellow stratified Sand, the upper<br>part contorted. | M. Sand with mosses etc.   |
| G. Mud-blended Sand.                                    | N. Glacial varved Clay.  |
| J. Stony, non-calcareous Clay.                          | O. Moraine Clay.   |

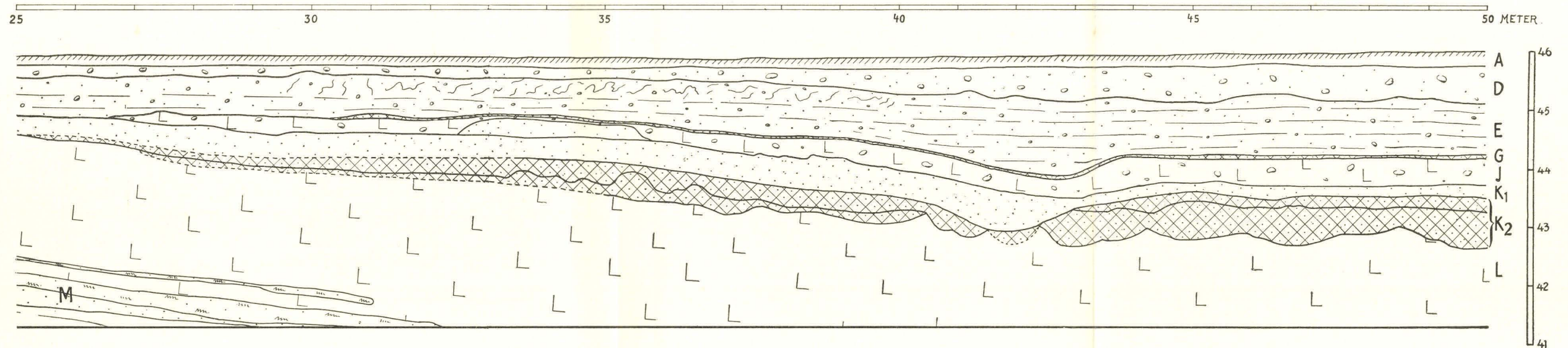
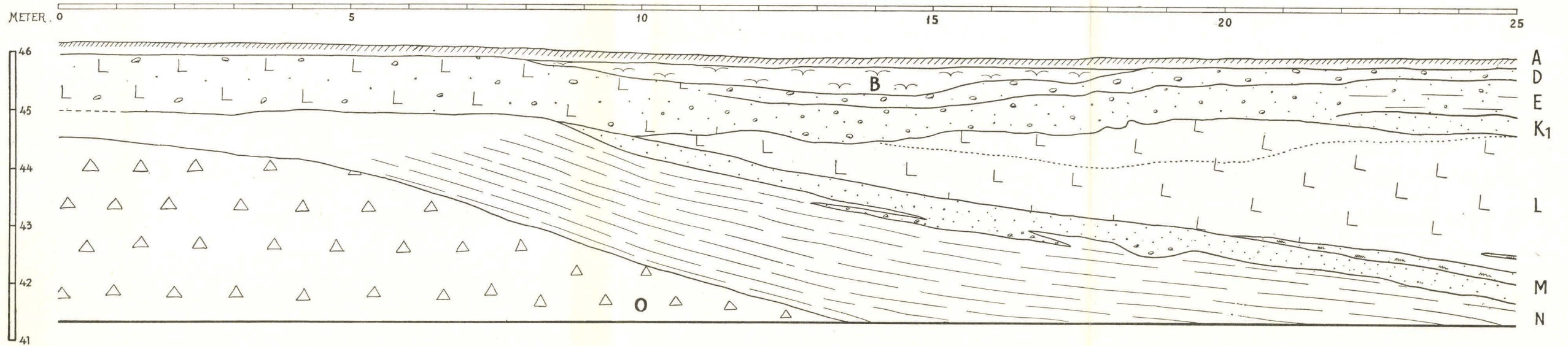
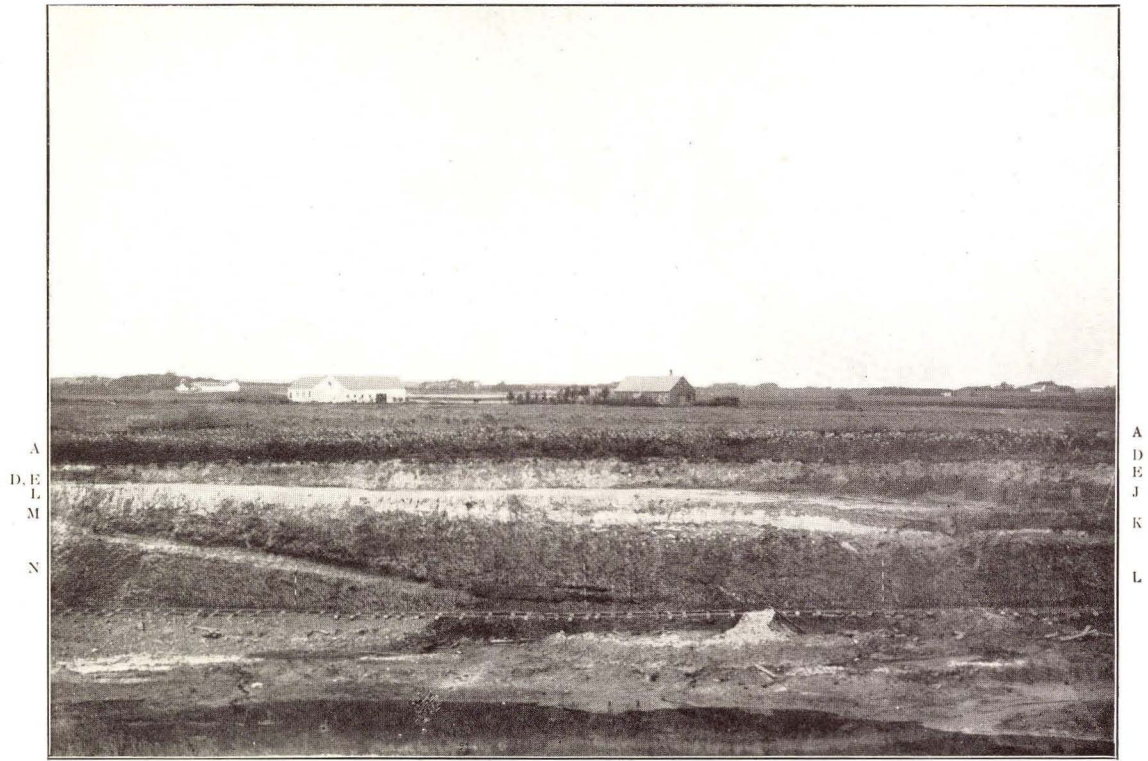


Plate IV.

## Plate IV.

Photograph of the west wall of the clay pit at Herring Brickworks 1914. The letters refer to description of the profile Pl. III.





A  
D  
E  
J  
K  
L  
M  
N

A  
D  
E  
J  
K  
L

WENDT & JENSEN rept.

V. MULTERS photo. 1914.

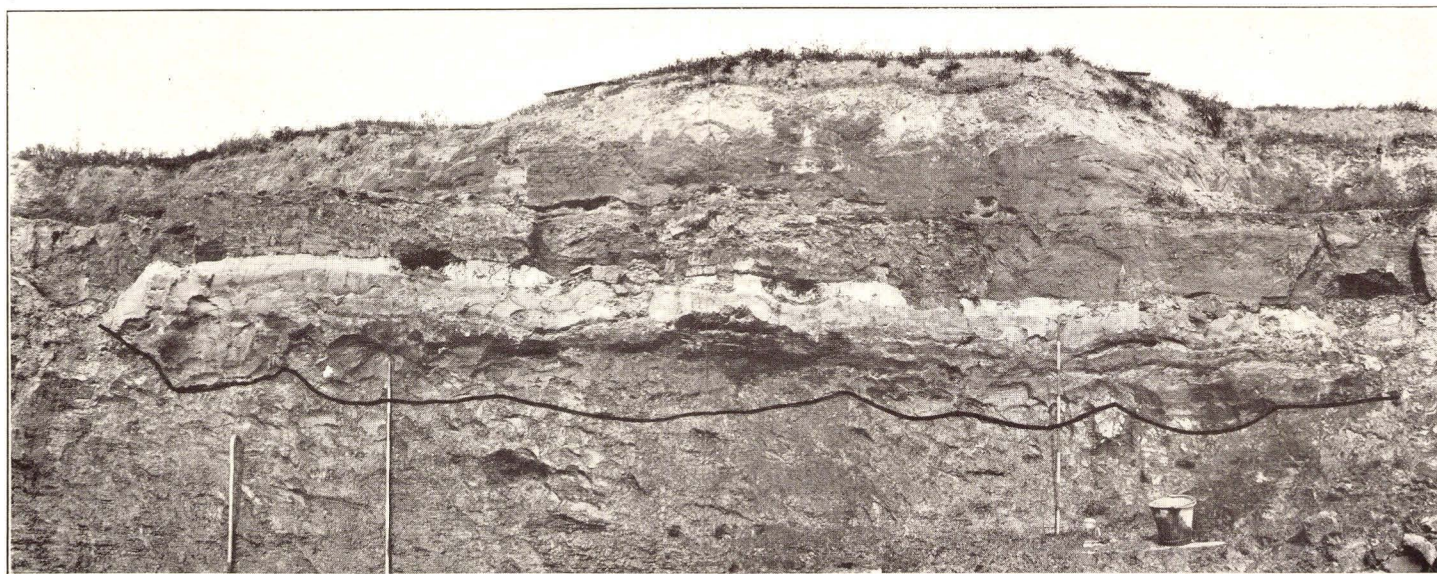
Plate V.

## Plate V.

Detail of the west wall in the clay pit at Herning Brickworks 1914. The letters refer to the description of the profile Pl. III. The black line shows the undulating boundary between the arctic clay and the *Ceratophyllum* bed.

D. G. U. II R. Nr. 48.

Pl. V.

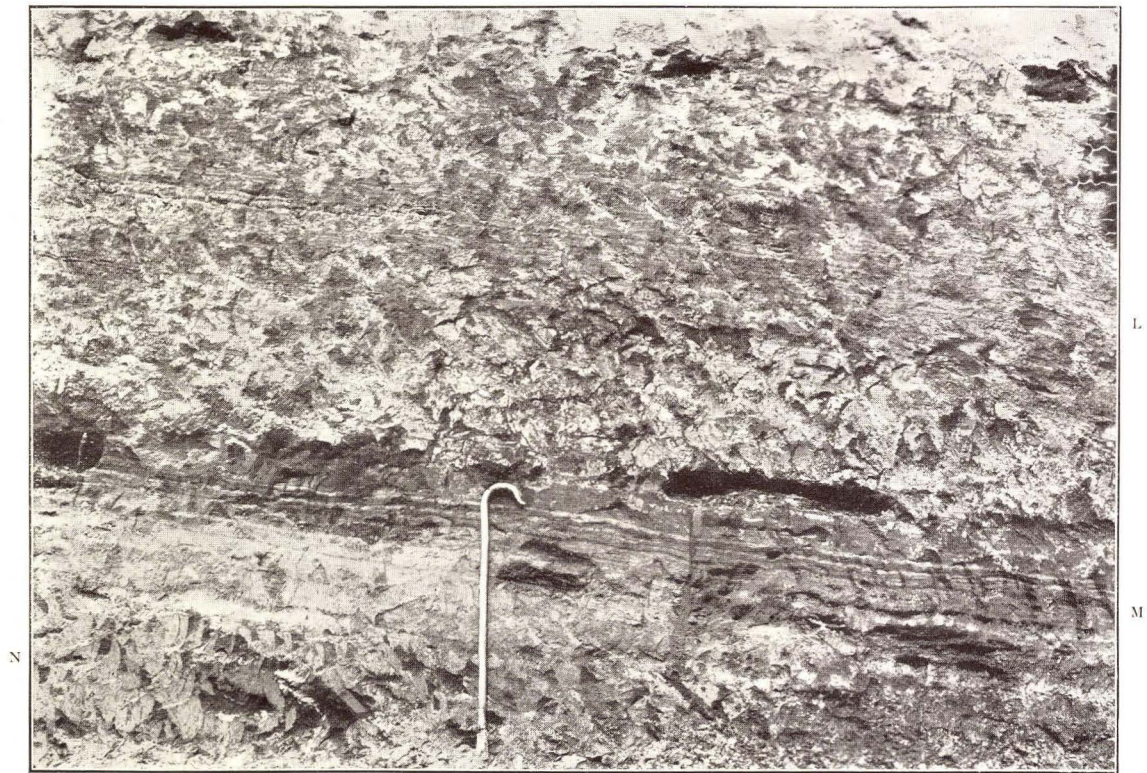


WENDT & JENSEN repr.

V. MILTHERS photo. 1914.

Plate VI.

Detail of the west wall of the clay pit at Herning  
Brickworks 1914. Arctic clay.



WENDT & JENSEN repr.

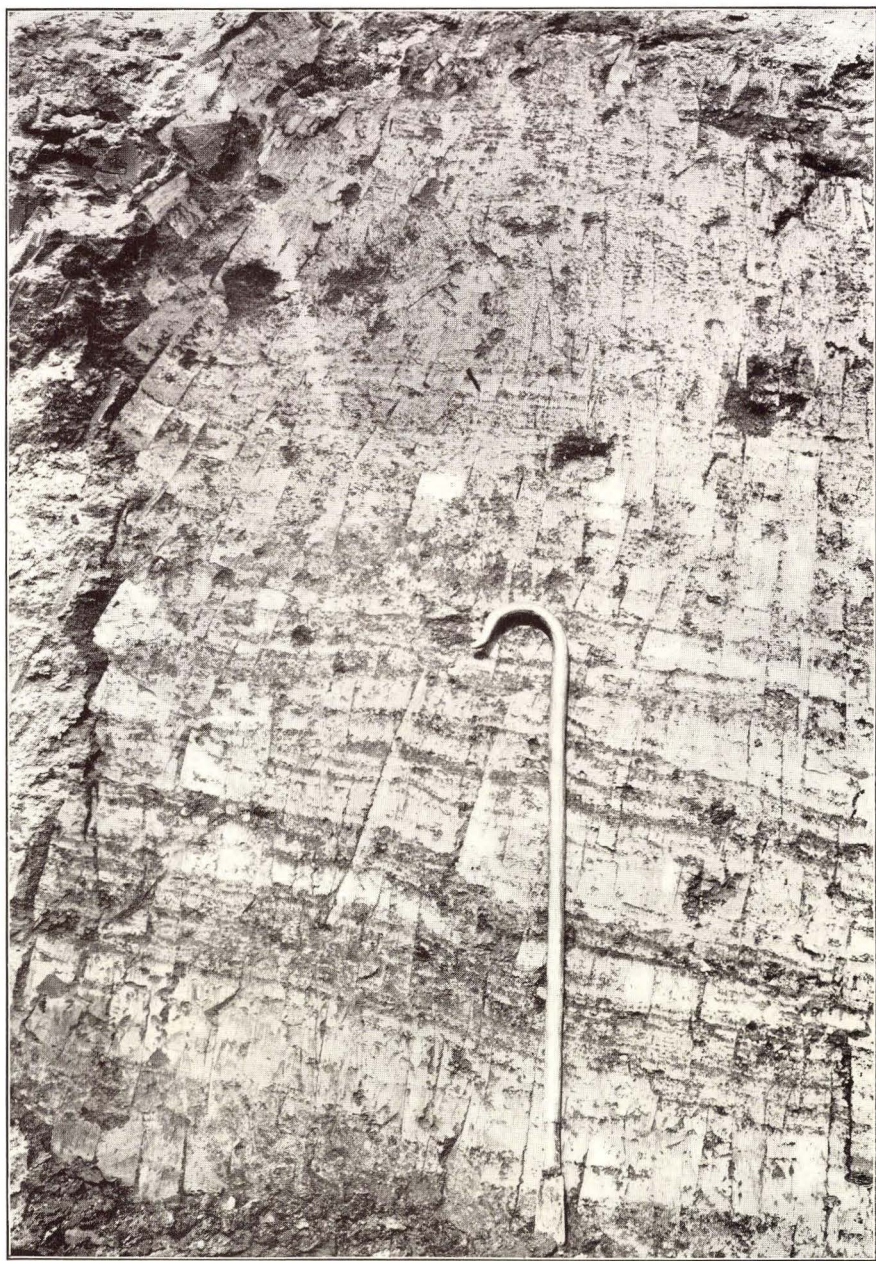
V. MULHERS photo. 1914.

Plate VII.

## Plate VII.

Detail of the west wall in the clay pit at Herning  
Brickworks 1914. The glacial varved clay.





WENDT & JENSEN rept.

V. MILTHERS photo. 1914.

Plate VIII.

## Plate VIII.

Longitudinal section of the interglacial lake deposits and their covering strata at Herning Brickworks; cf. Pl. II and III. At the bottom, the section with true proportion between length and height. (A corresponding drawing is also given at foot of the other sections in the following plates). — The cross to the south of Boring I indicates the southern face of the brickworks pit in 1914.

### Explanation of the signs.

- |                                  |                            |
|----------------------------------|----------------------------|
| 1. Mould.                        | 6. Sandy Clay with stones. |
| 2. <i>Phragmites</i> Peat.       | 7. Sandy Mud.              |
| 3. Sand, partly wind-blown sand. | 8. Mud.                    |
| 4. Sand with stones.             | 9. Glacial Clay.           |
| 5. Clay and Clay Mud.            | 10. Moraine Clay.          |

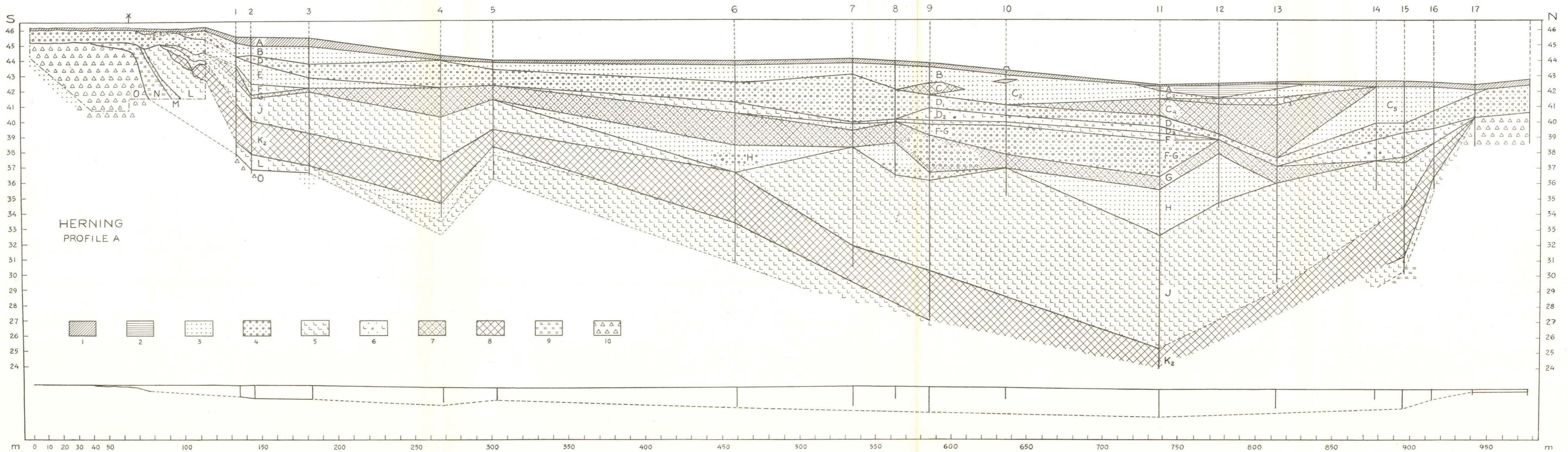


Plate IX.

## Plate IX.

Transverse section of the interglacial lake deposits  
and their covering strata at Herning Brickworks; cf. Pl. II.

### Explanation of the signs.

- |                            |                            |
|----------------------------|----------------------------|
| 1. Mould.                  | 6. Sandy Clay with stones. |
| 2. <i>Phragmites</i> Peat. | 7. Sandy Mud.              |
| 3. Sand.                   | 8. Mud.                    |
| 4. Stony Sand.             | 9. Glacial Clay.           |
| 5. Clay and Clay Mud.      | 10. Moraine Clay.          |

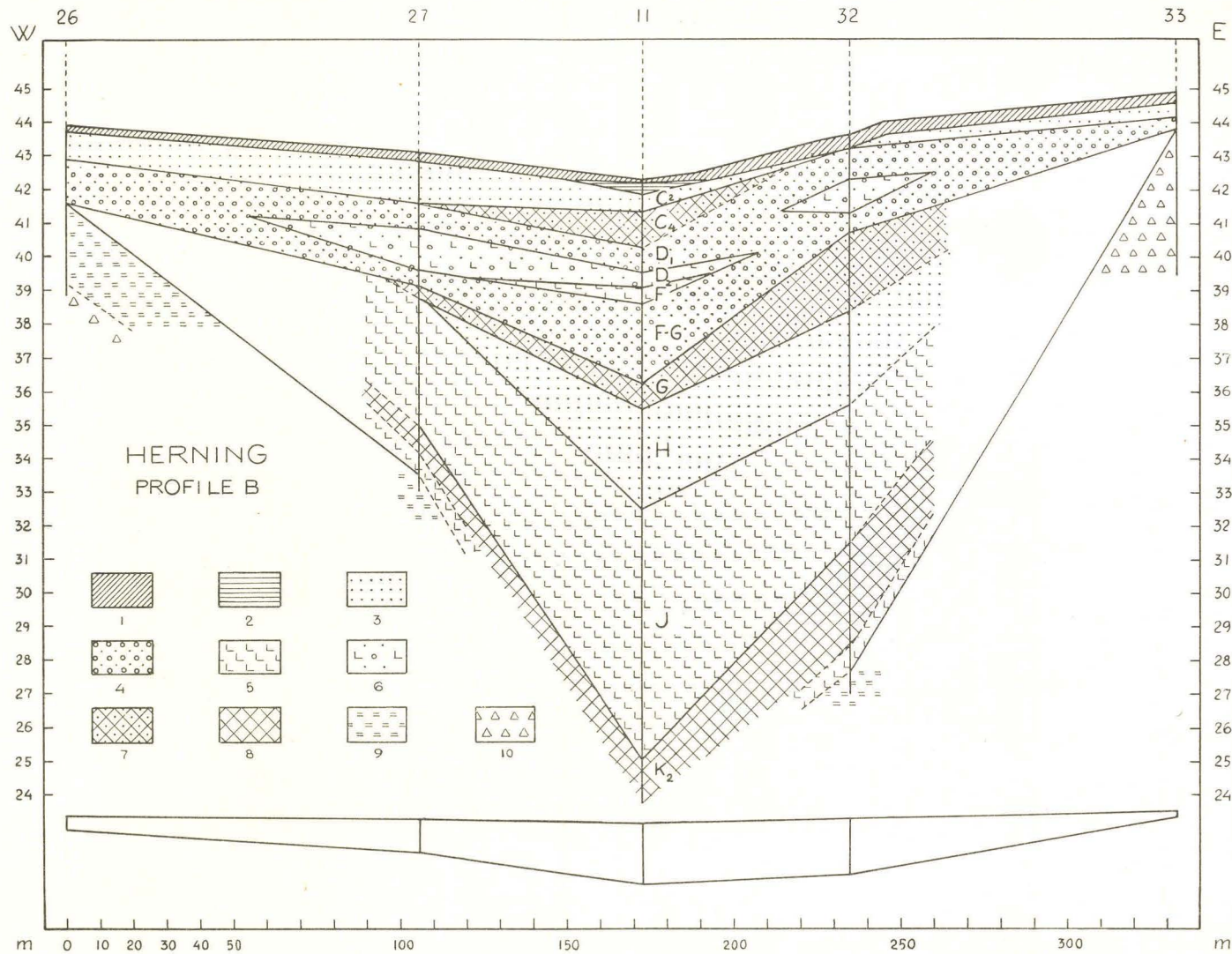


Plate X.



## Plate X.

Photograph of the depression above the interglacial bog at Nörböiling, seen from the north-west. The recent bog is seen in the middle of the picture.



WENDT & JENSEN repr.

V. MILTHEUS photo. 1923.

Plate XI.

## Plate XI.

### The interglacial bog at Nörbölling.

Fig. 1. Profile A.

Fig. 2. Profile B.

#### Explanation of the signs.

1. Mould.
2. Sand and stony Sand.
3. Stoneless Clay and Clay Mud (below the basin, glacial Clay).
4. Clay and Clay Mud with Sand and Stones.
5. *Sphagnum* Peat.
6. Detritus Mud and Sandy Mud.
7. Horny Mud.
8. Moraine Clay.

Fig. 3. Map showing the extent of the lake deposits and position of the borings.

- ..... Approximate boundary of the depression.  
-.-.-.-.- Boundary of the lower, interglacial mud bed.  
- . . . . - - - - upper, - - - -  
- . . . . - - - - post-glacial mud bed.  
A-A and B-B indicate position of the two sections A and B.

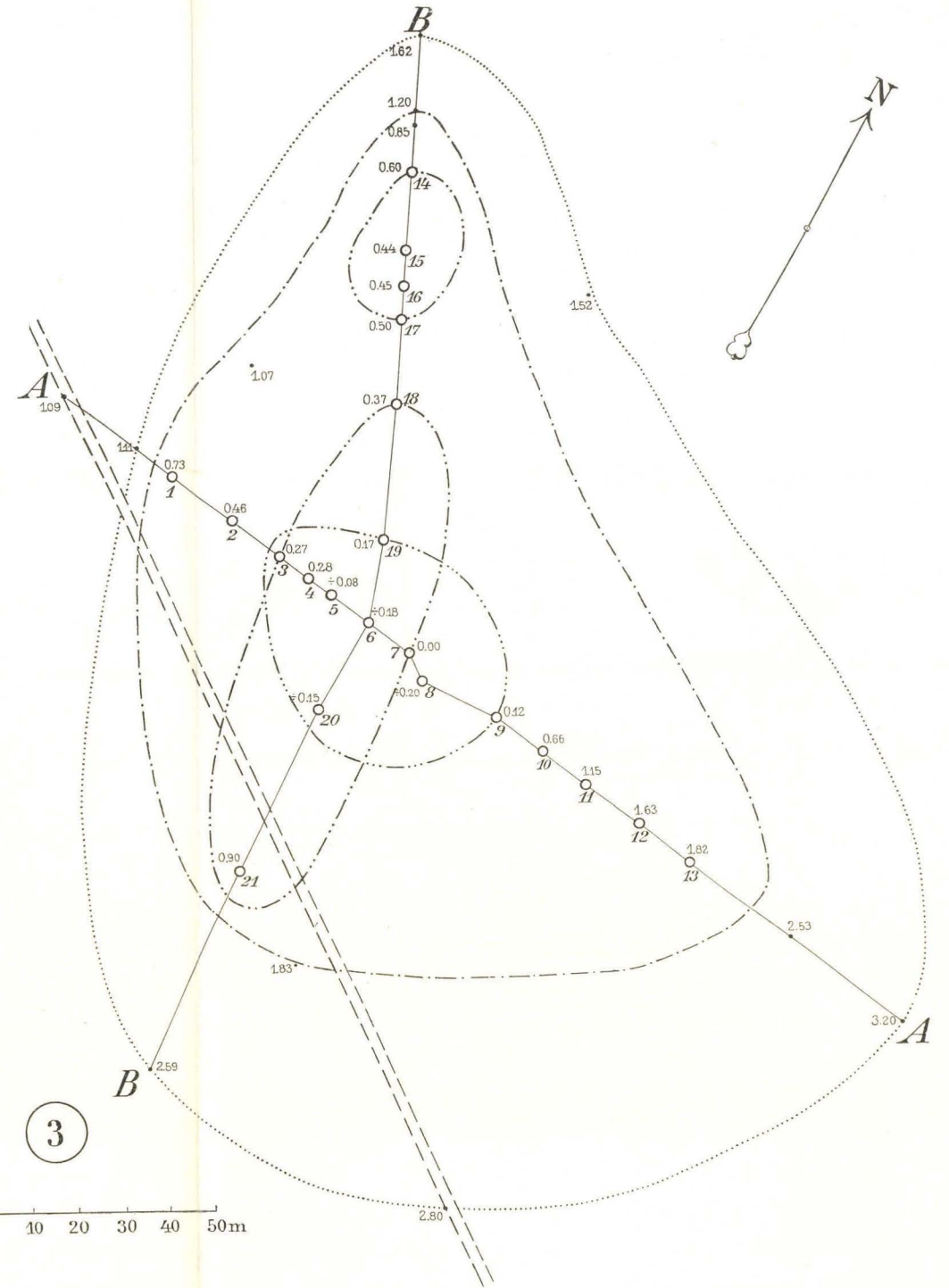
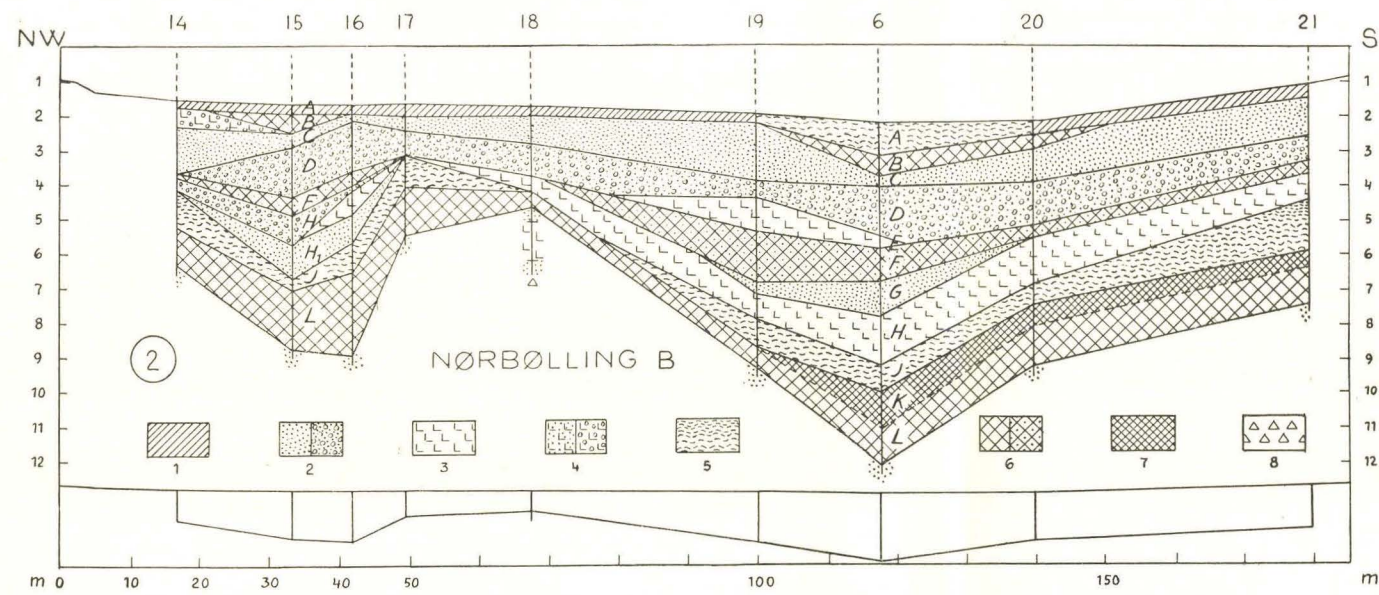
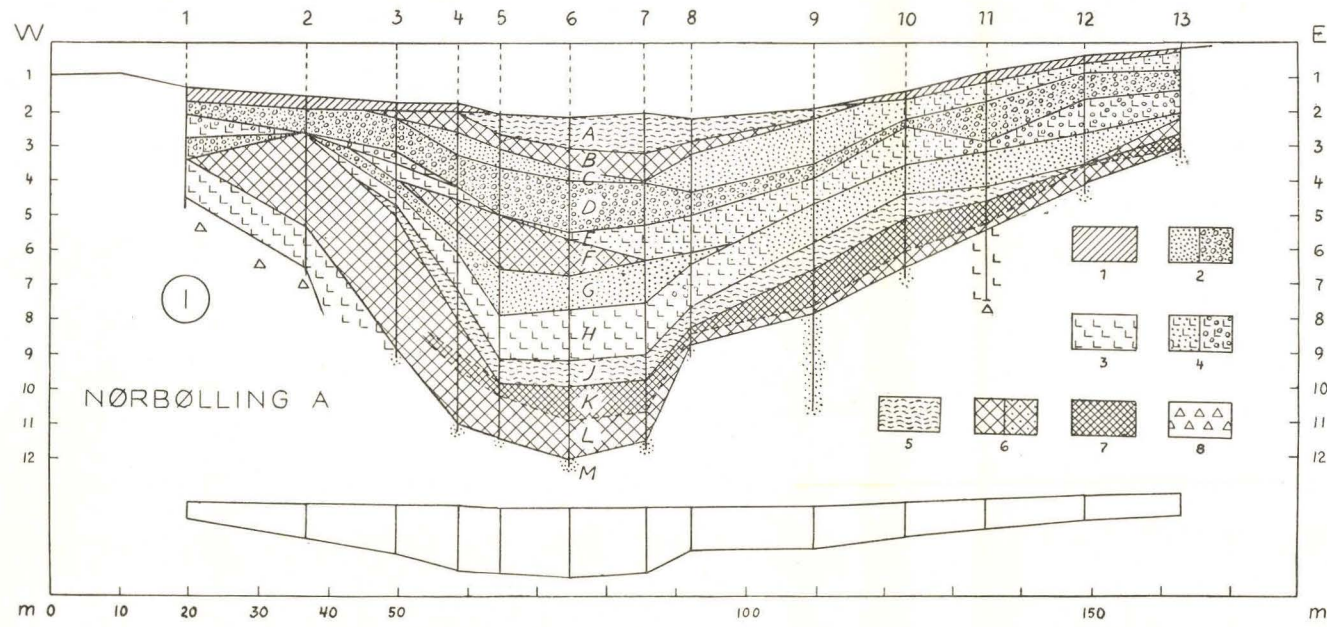


Plate XII.

Plate XII.

Photograph of the depression above the interglacial bog at Brörup Hotel, seen from the east.



WENDT & JESSEN repr.

V. MILTHERS photo. 1923.



Plate XIII.

## Plate XIII.

### The interglacial bog at Brörup Hotel.

Fig. 1. Profile of the interglacial lake deposits and their covering strata.

#### Explanation of the signs.

- |                                 |                  |
|---------------------------------|------------------|
| 1. Mould.                       | 5. Detritus Mud. |
| 2. Sand.                        | 6. Sandy Mud.    |
| 3. Sand with stones.            | 7. Clay.         |
| 4. <i>Sphagnum-Hypnum</i> Peat. | 8. Moraine Clay. |

Fig. 2. Map showing position of the borings and the extent of the interglacial mud beds. A—A indicate position of the section figured in Fig. 1.

- |               |   |
|---------------|---|
| .....         | Approximate extent of the depression.       |
| — · — · — · — | Boundary of the interglacial lake deposits. |
| —————         | Dike.                                       |

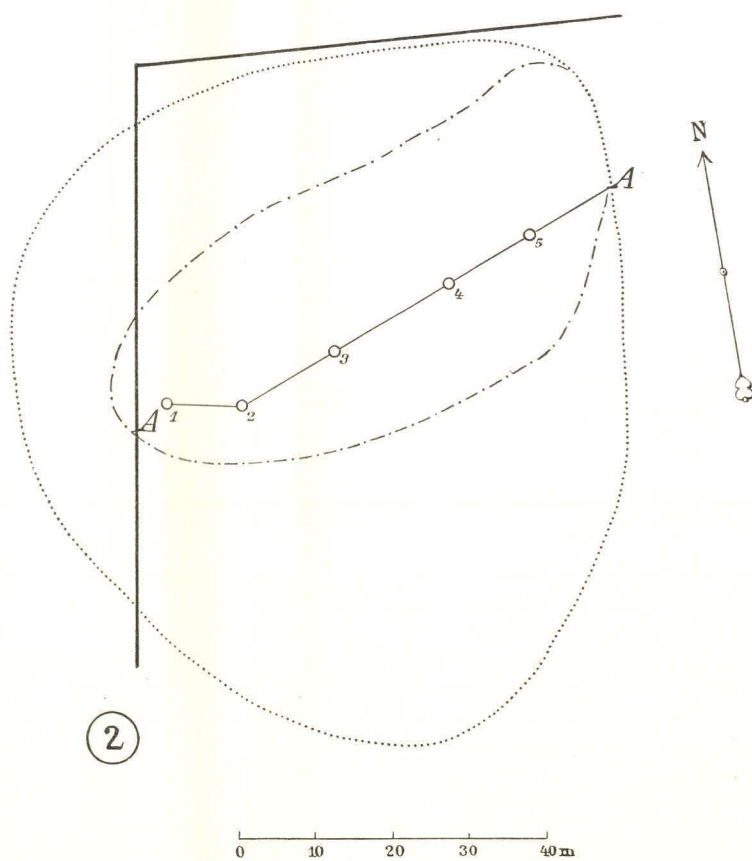
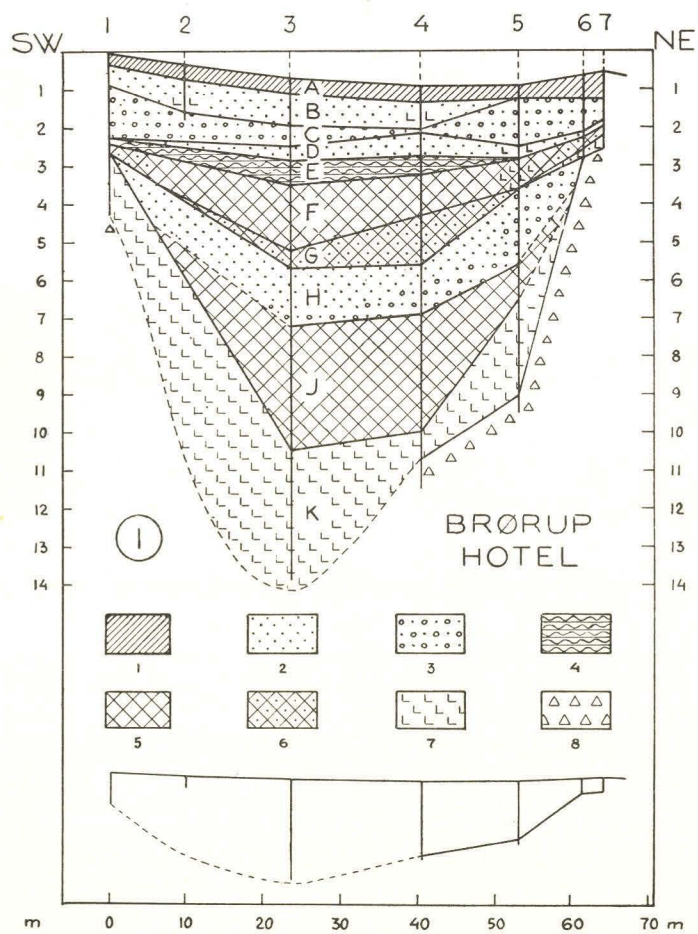
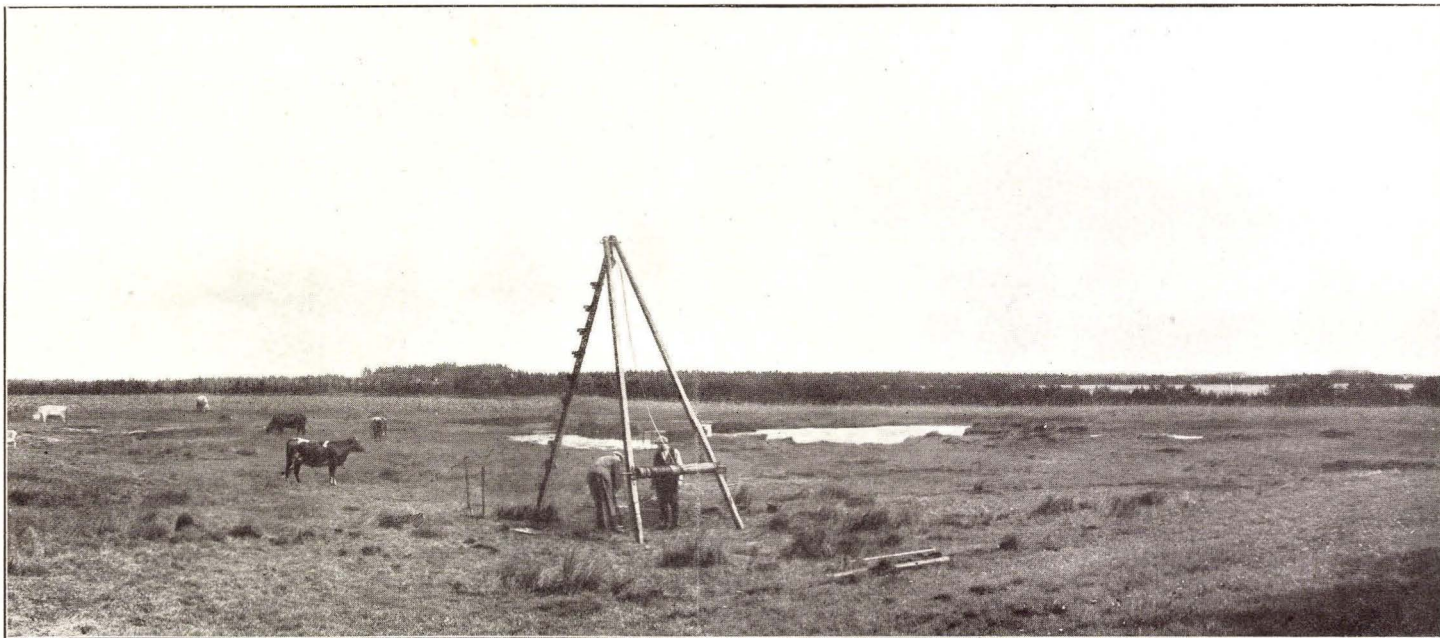


Plate XIV.

## Plate XIV.

Photograph of the depression above the interglacial bog at Rødebæk I, seen from the south-west. Behind the drill is seen the recent bog and the pool produced by excavation of the peat.



WENDT & JENSEN repr.

V. MILTHERS photo. 1923.

Plate XV.

## Plate XV.

### The Interglacial Bog at Rodebæk I.

Fig. 1. Profile A.

Fig. 2. Profile B.

Fig. 3. Profile C.

#### Explanation of the signs.

- |                       |                          |
|-----------------------|--------------------------|
| 1. Mould and Rubbish. | 6. <i>Sphagnum</i> Peat. |
| 2. Sand.              | 7. Forest Peat.          |
| 3. Sand with stones.  | 8. Sandy Mud.            |
| 4. Clay and Clay Mud. | 9. Detritus Mud.         |
| 5. Moraine Clay.      | 10. Calcareous Mud.      |

Fig. 4. Map showing the extent of the interglacial mud beds and position of the borings.

- ..... Extent of the meadow in the hollow above the interglacial basin.  
— . — . — . — Boundary of the lower interglacial mud bed.  
— .. — .. — — upper — — —  
A—A, B—B and C—C indicate the position of the three profile sections A, B and C.



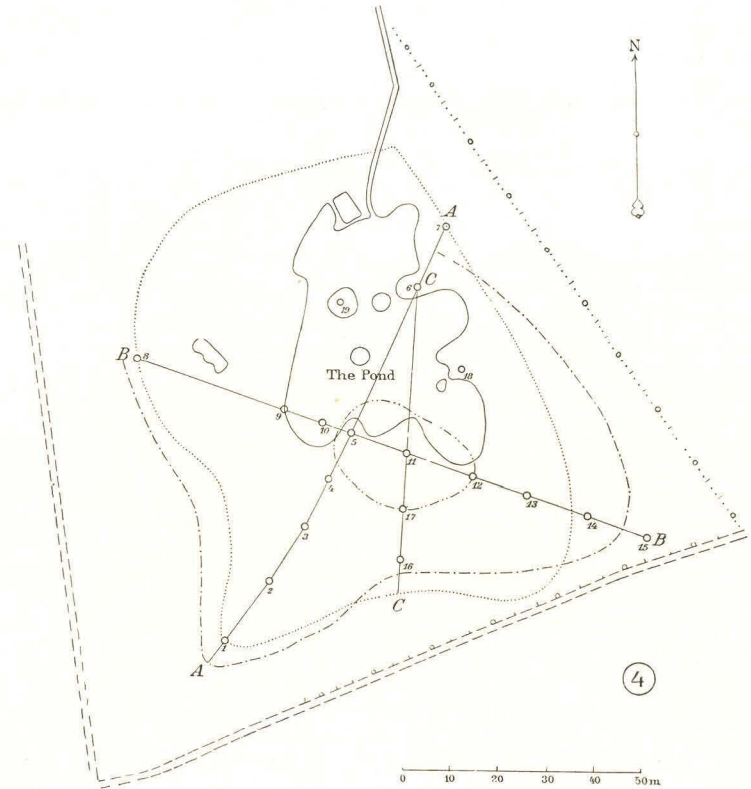
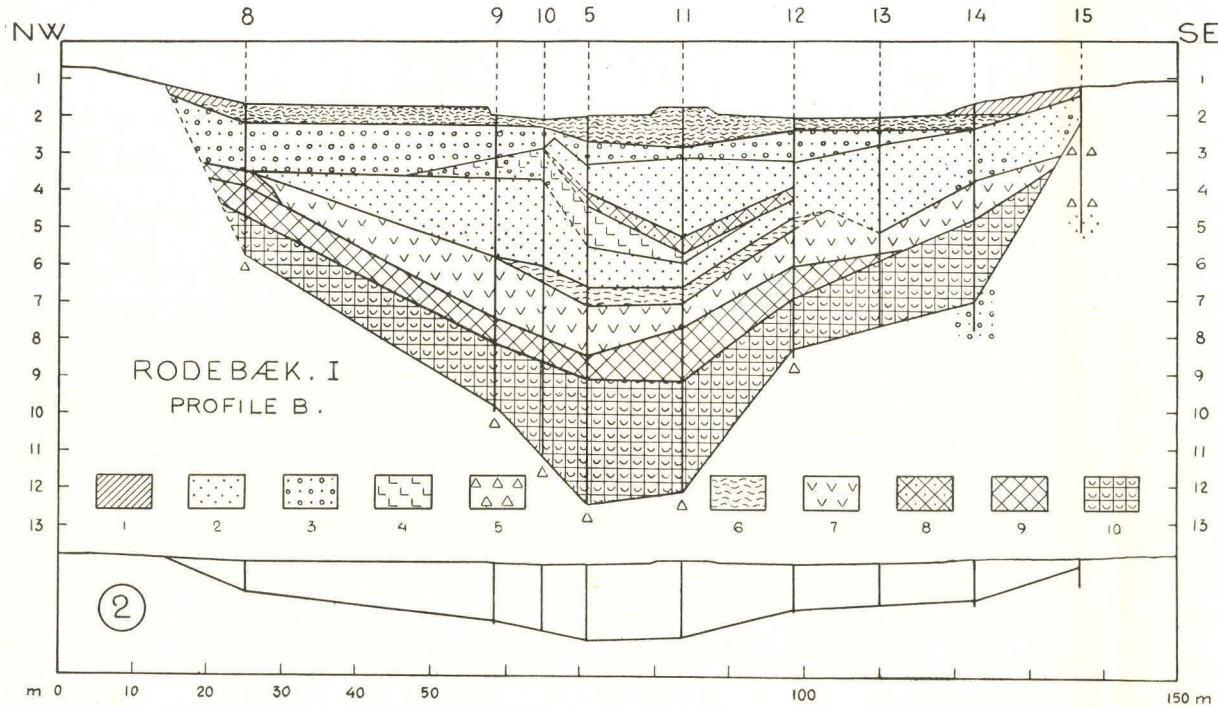
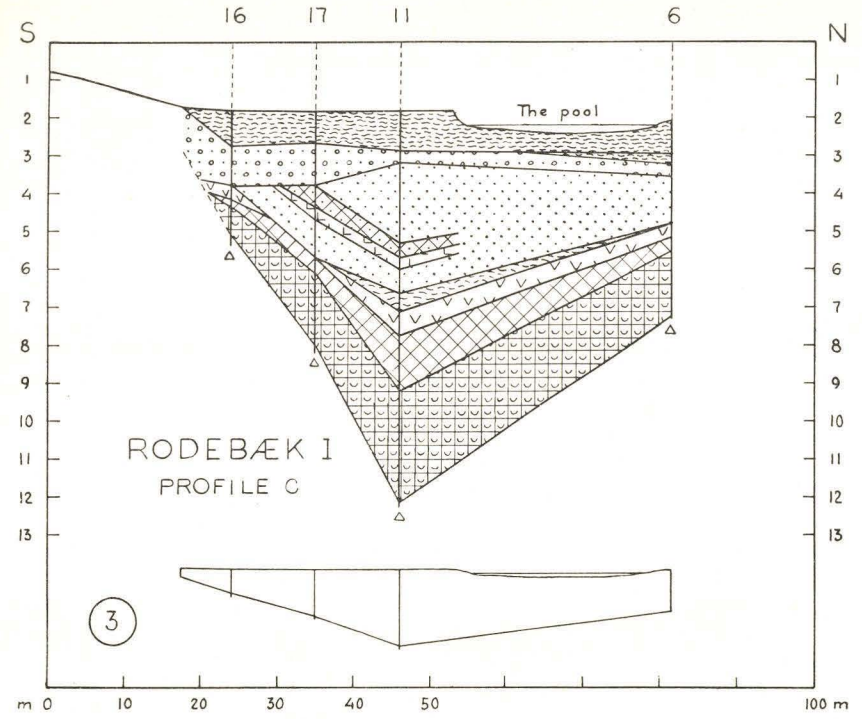
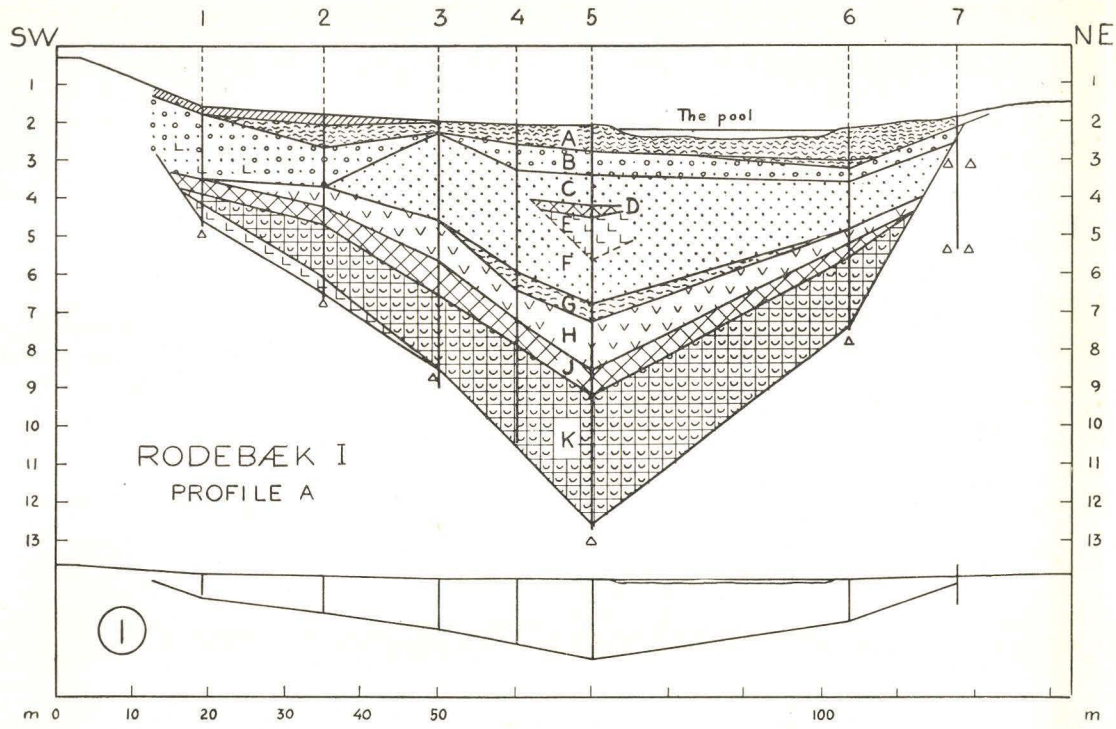


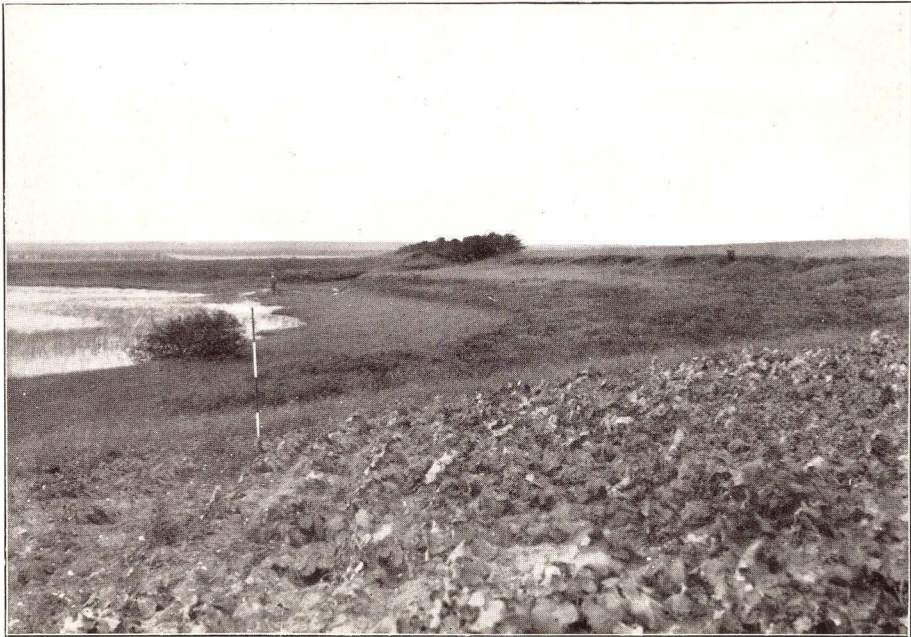
Plate XVI.

Plate XVI.

Photograph of the eastern shore of Solsö.

Fig. 1. Looking north.

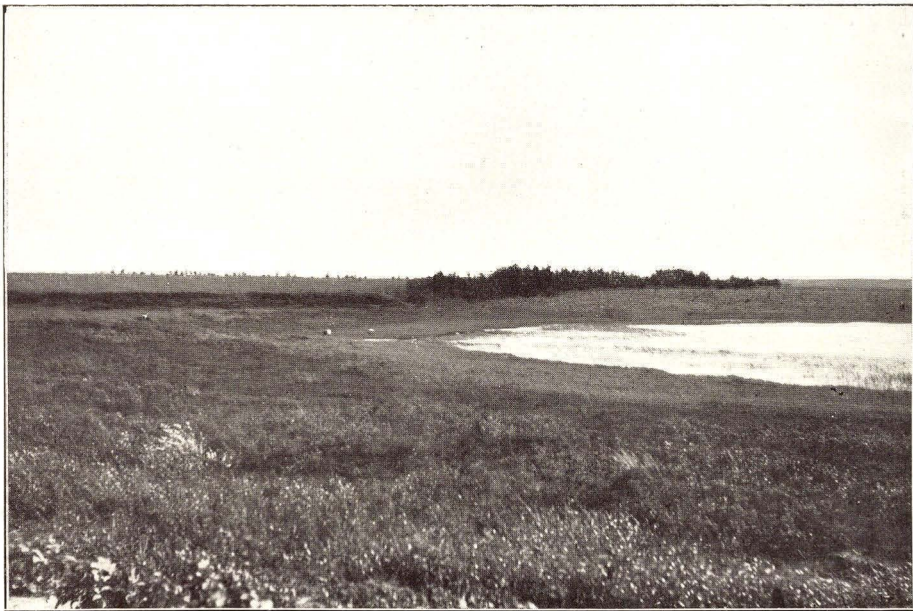
Fig. 2. Looking south-west.



WENDT & JENSEN repr.

1

LUND photo. 1923.



WENDT & JENSEN repr.

2

LUND photo. 1923.

Plate XVII.

## Plate XVII.

The interglacial lake deposits at Solsö.

Fig. 1. Profile A.

Fig. 2. Profile B.

Fig. 3. Profile C.

### Explanation of the signs.

1. Sand, with vegetable remains in parts.
2. Sand with stones.
3. Clay and Clay Mud.
4. Glacial Clay.
5. Moraine Clay.
6. Mud.
7. *Sphagnum* Peat.

Fig. 4. Map showing extent of the lake at different times and position of the borings.

- ..... Greatest extent of the lake in late-glacial time.  
-.-.-.-.- Boundary of the interglacial mud bed J.  
-...-...- - - - - post-glacial mud bed.

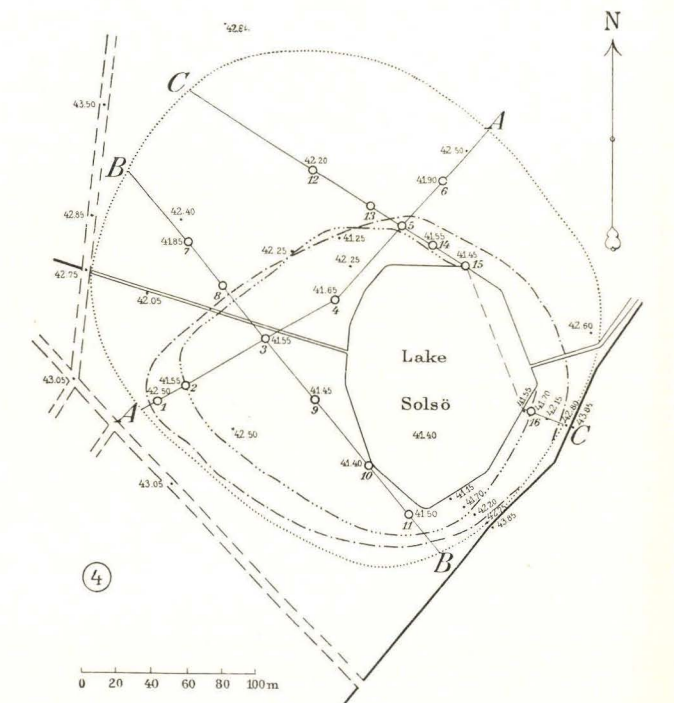
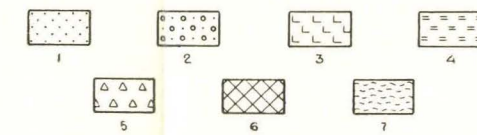
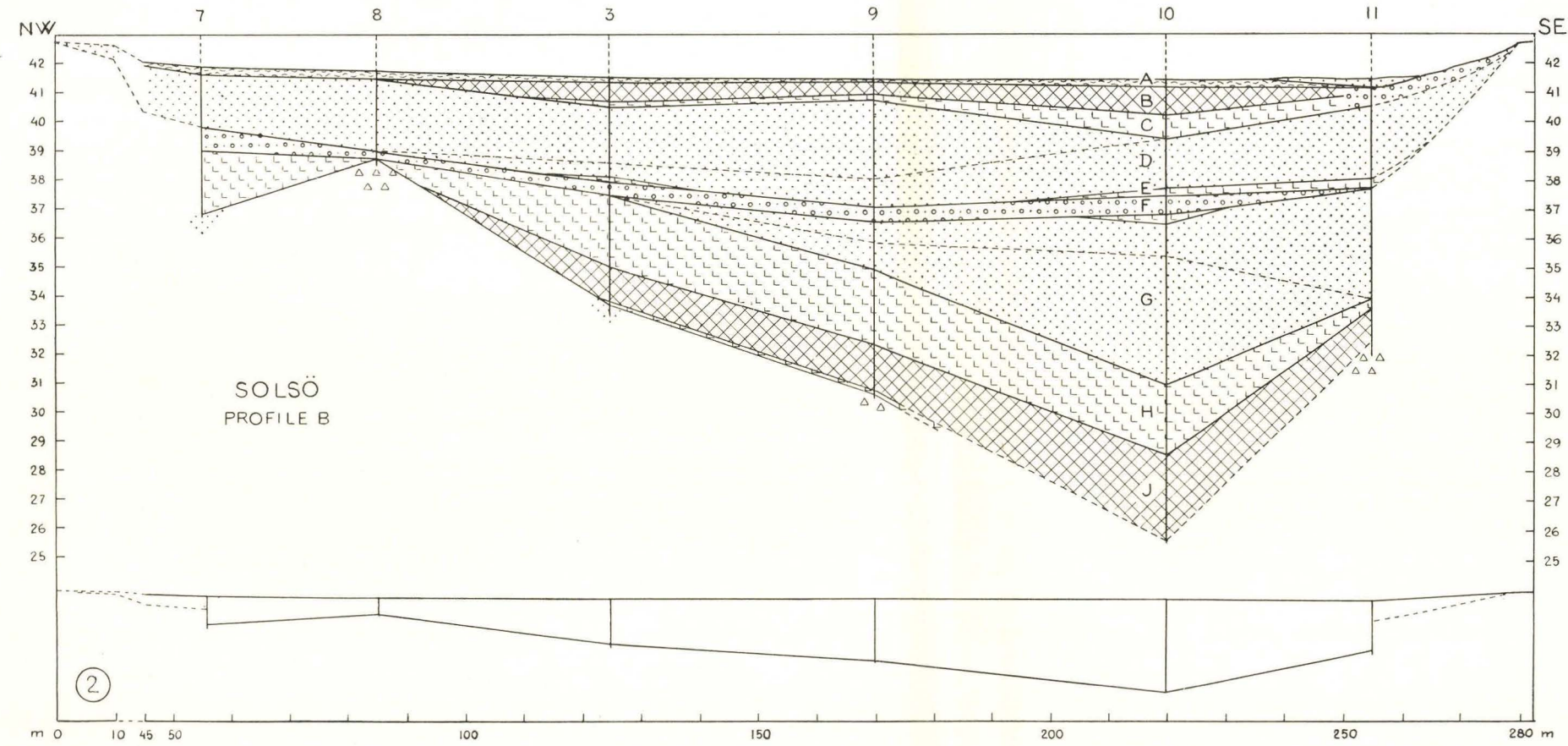
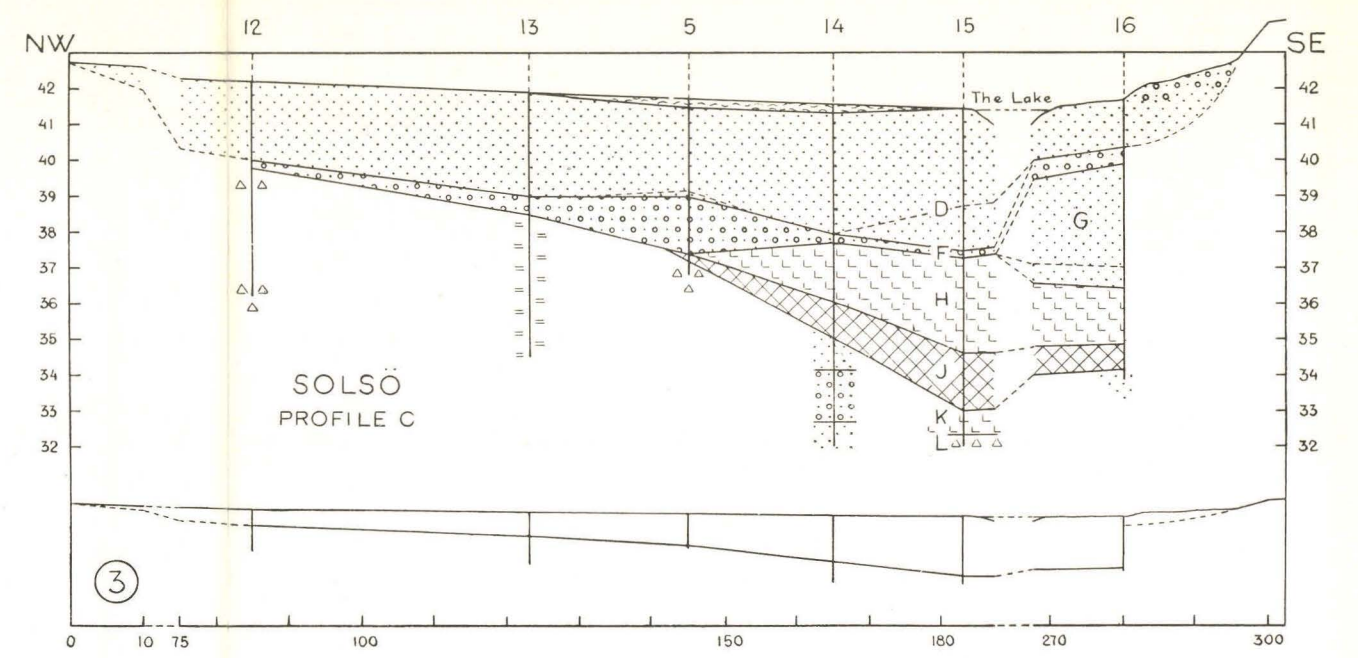
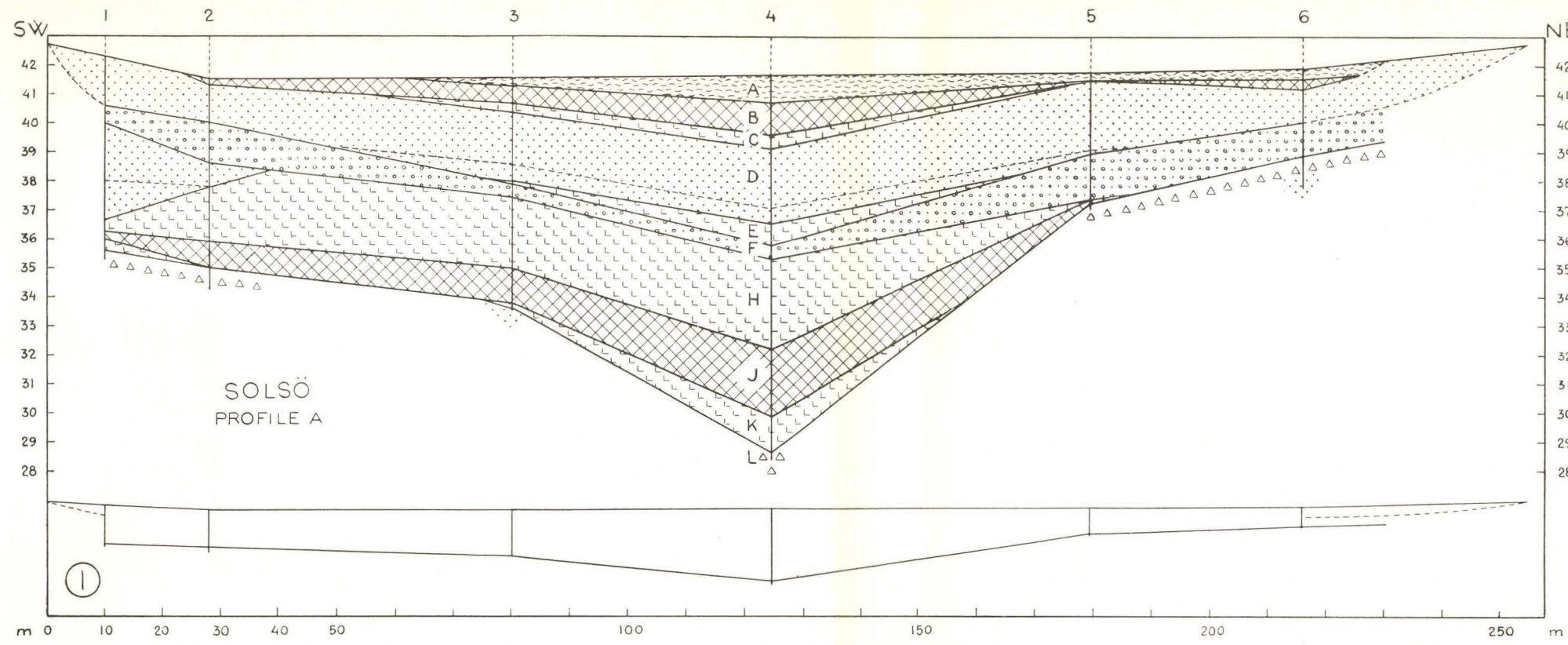


Plate XVIII.



## Plate XVIII.

Fig. 1. Photograph of the depression above the interglacial bog at Duedam I, seen from the north-east.

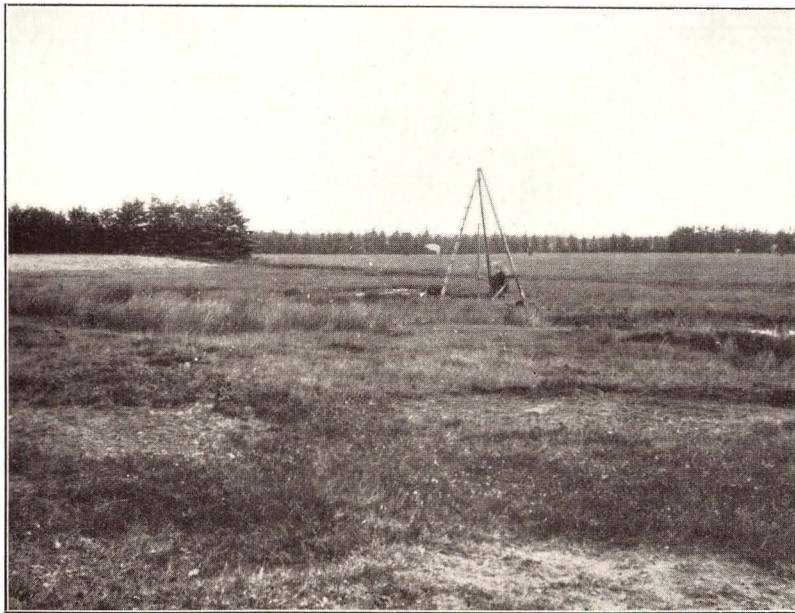
Fig. 2. Photograph of the depression above the interglacial bog at Rodebæk II, seen from the south.



WENDT & JESSEN repr.

1

KNUD JESSEN photo. 1924.



WENDT & JESSEN repr.

2

KNUD JESSEN photo. 1922.

## Plate XIX.

Fig. 1. Photograph of the depression above the interglacial bog at Fövling, seen from the east.

Fig. 2. Photograph of the depression above the interglacial bog at Over Gestrup, seen from the south; the water pump is at the northern end of the hollow.



WENDT & JESSEN repr.

1

KNUD JESSEN photo. 1922.



WENDT & JESSEN repr.

2

KNUD JESSEN photo 1924.

## Plate XX.

Fig. 1. From the marl pit at Rind. Diluvial gravel above the arched bed of ochreous clay (Profile 2, p. 181); below, the interglacial calcareous mud and fallen material. The profile wall in the calcareous mud was overhung and therefore in deep shadow.

Fig. 2. Upper part of the covering strata above the interglacial mud at Harreskov. Contorted fluvioglacial sand is seen with small stones and blocks of stoneless sand above fallen material. The knife is 15 cm long.



WENDT & JENSEN repr.

1

KNUD JESSEN photo. 1925.



WENDT & JENSEN repr.

2

KNUD JESSEN photo. 1925.

Plate XXI.

## Plate XXI.

The interglacial lake deposit at Harreskov.

Fig. 1. Map showing position of the borings and of the section A—A, which is shown in Pl. XXII.

Fig. 2. 13 boring profiles. For explanation see Pl. XXII.



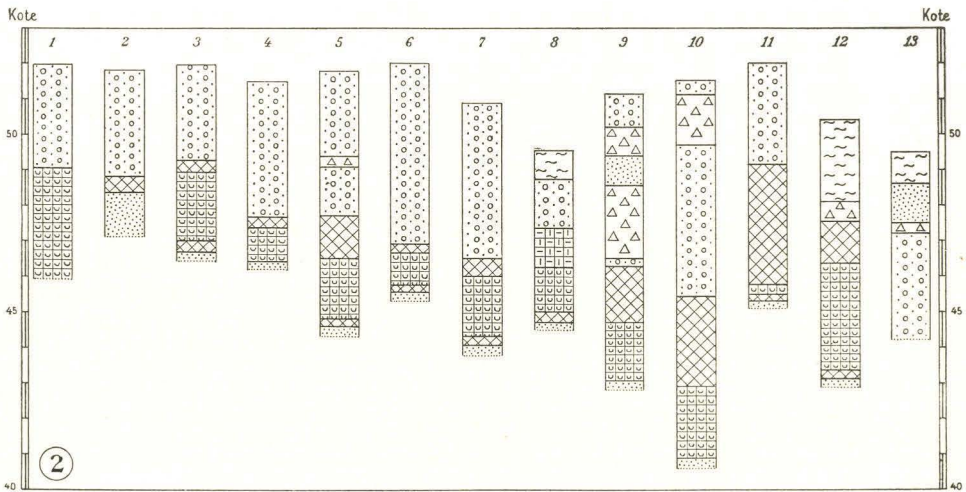
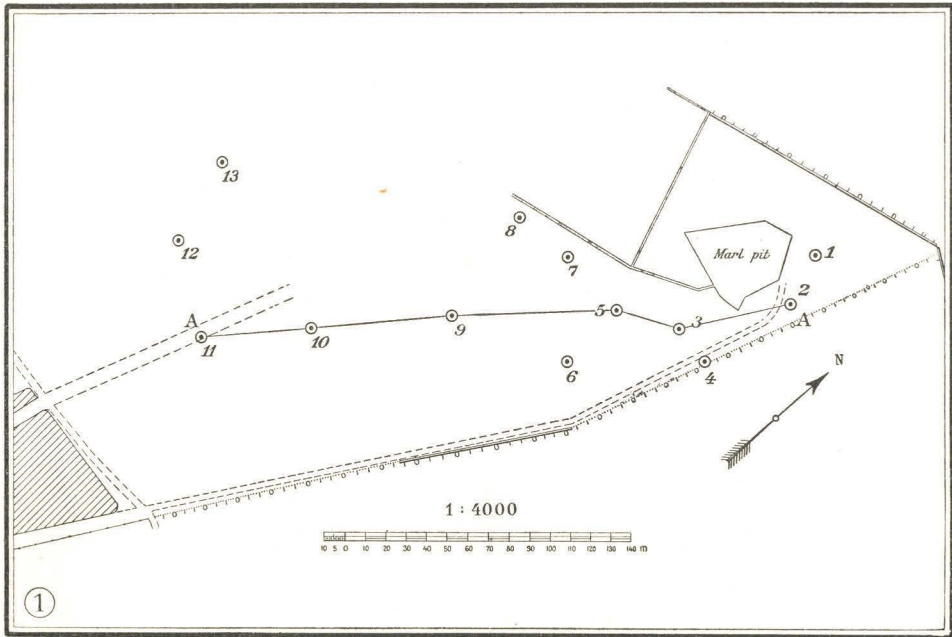


Plate XXII.

## Plate XXII.

Profile of the interglacial lake deposit at Harreskov,  
based on 6 of the boring profiles shown in Pl. XXI.

Explanation of the signs used in Plates XXI and XXII.

1. Stony Sand.
2. Sand without stones.
3. Moraine Clay.
4. Mud
5. Calcareous Mud (Marl).
6. Diatomaceous Earth.
7. Peat.

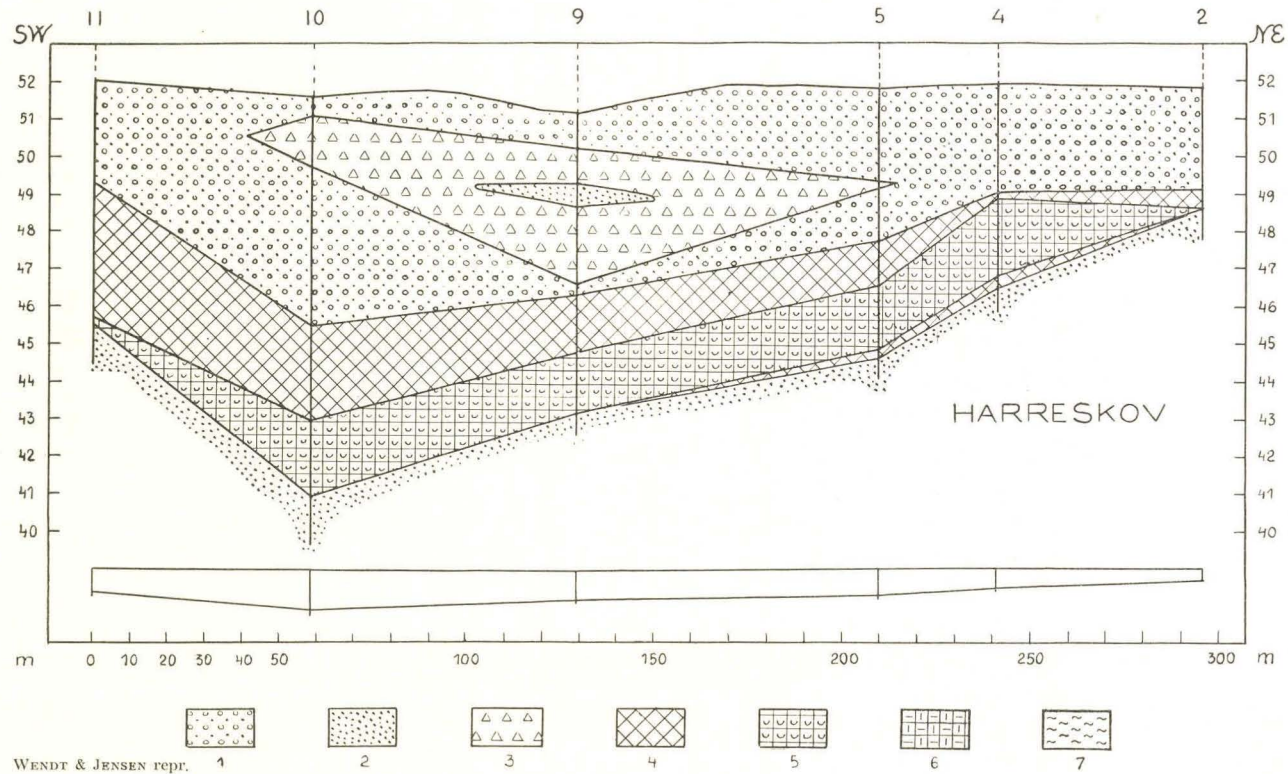


Plate XXIII.

## Plate XXIII.

Fig. 1. Profile of the interglacial ochre bed at Lövska I.

Fig. 2. Profile of the interglacial lake deposit at Egtved.

### Explanation of the signs.

- |                             |                            |
|-----------------------------|----------------------------|
| 1. Fluvioglacial Sand.      | 8. Sandy Ochre.            |
| 2. Moraine Clay.            | 9. Ochre.                  |
| 3. Diluvial Clay.           | 10. Mud.                   |
| 4. Wind-blown Sand.         | 11. Calcareous Mud (Marl). |
| 5. Stony Sand.              | 12. Sandy Calcareous Mud.  |
| 6. Sand without stones.     | 13. Diatomaceous Earth.    |
| 7. Post-glacial River Sand. |                            |

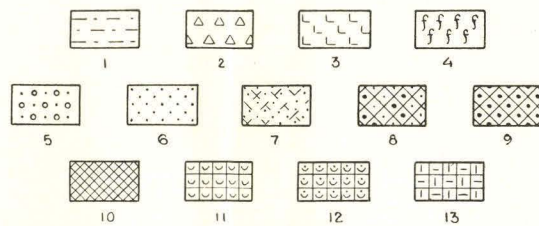
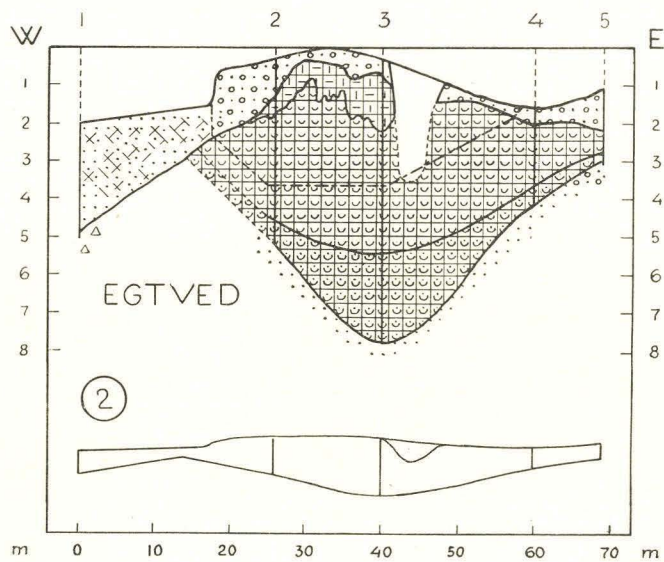
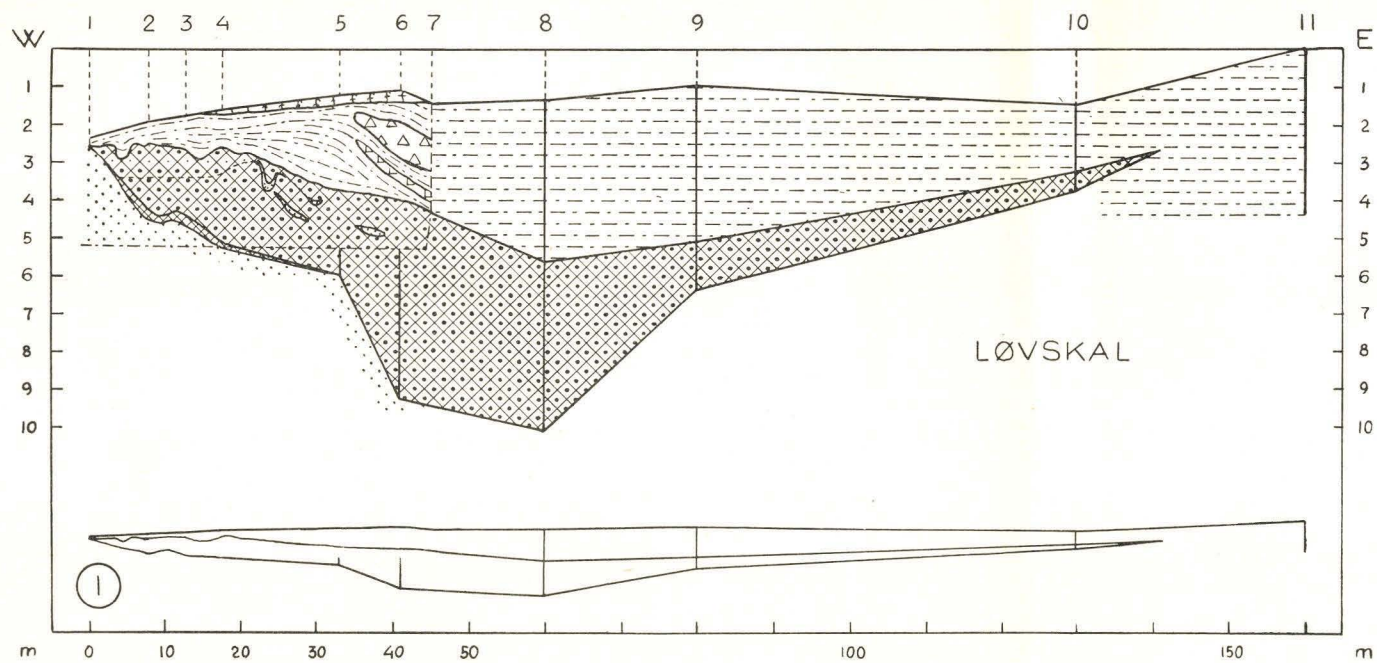





Plate XXIV.



## Plate XXIV.

Map showing method of calculating the solifluction  
at Solsö during the last glacial period.

-  Isopachytes for thickness of covering strata.
-  Contour lines, metre.
-  Watershed line.



0 100 200 300 400 500m

Plate XXV.

## Plate XXV.

Maps illustrating the imaginary transformation of a young-glacial landscape by subaërial denudation.

Fig. 1. The originally area with its outer watershed and surrounding landscape; from the General Staff Map for Ledreborg, No. 94 (1886).

Contour lines 5 ft. = 1.57 m. Scale 1:20.000.

Fig. 2. Same area. Contour lines and interpolated watershed lines. Scale 1:10.000.

Fig. 3. Same area with the new contour lines for the transformed area (5 ft. = 1.57 m). The denudation area is shown in red.

Fig. 4. Same area showing thickness of the earth-masses moved; isopachytes in red for the denudation area and in blue for the accumulation area.

Contour lines and isopachytes 5 ft. = 1.57 m.

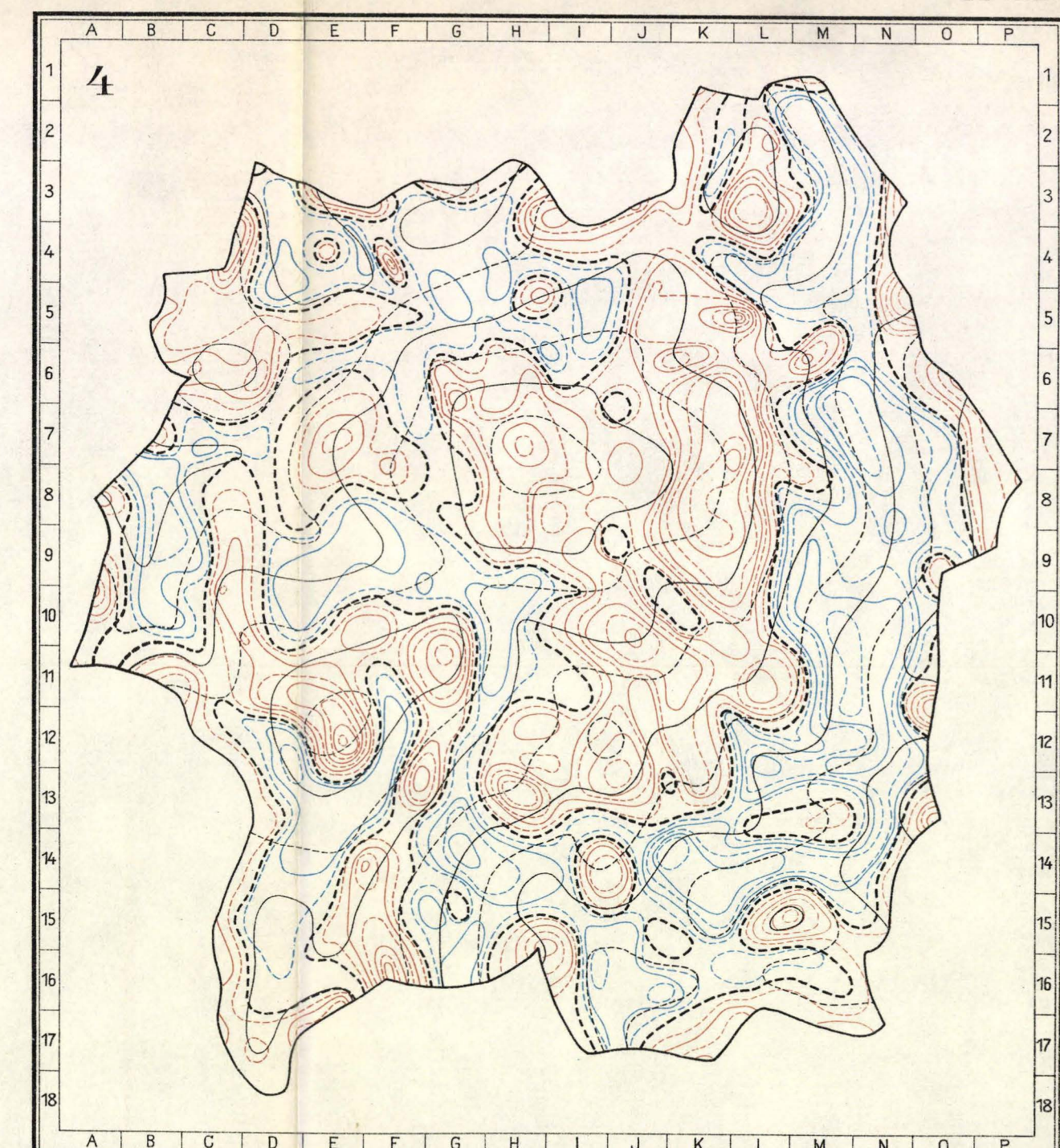
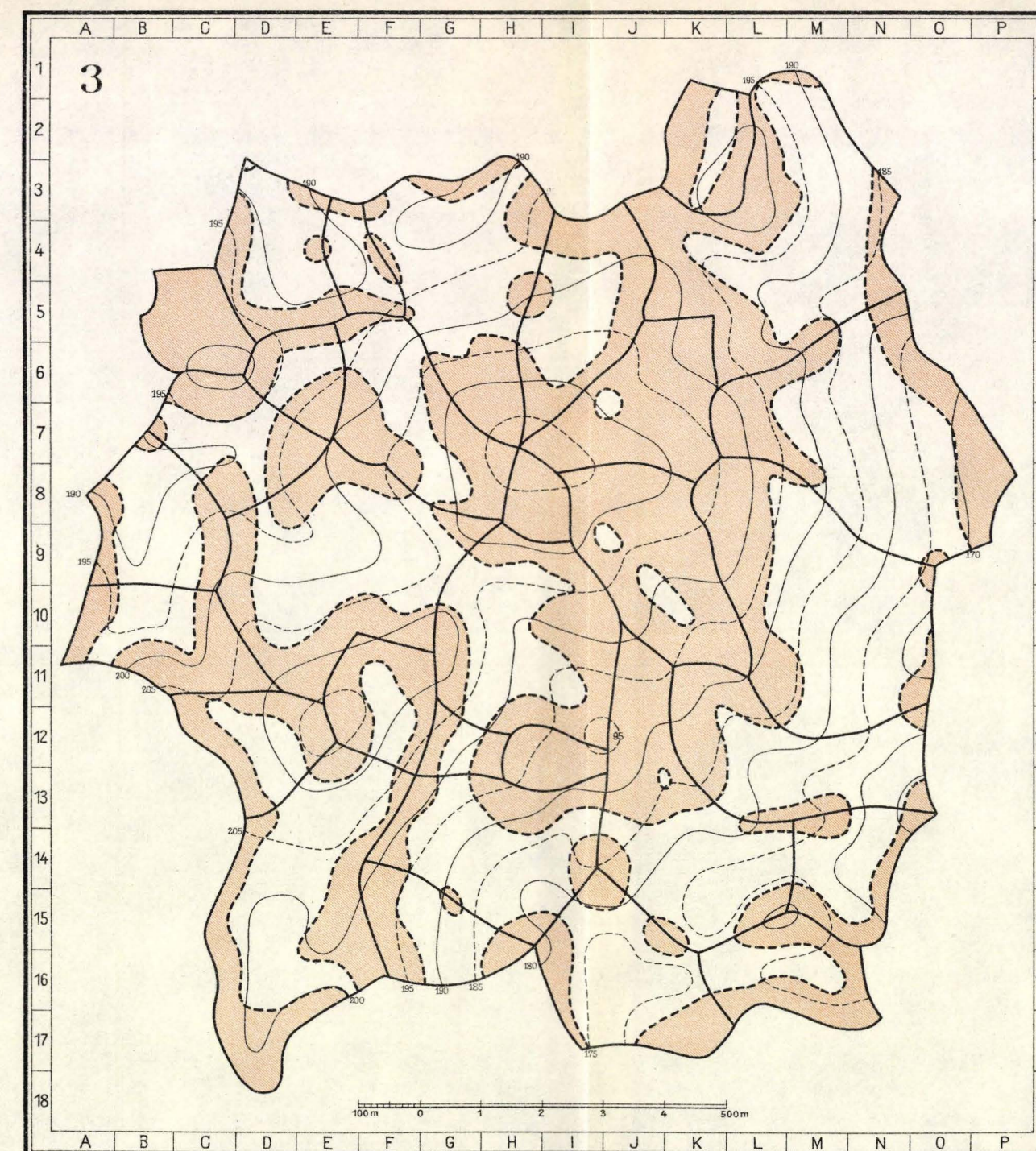
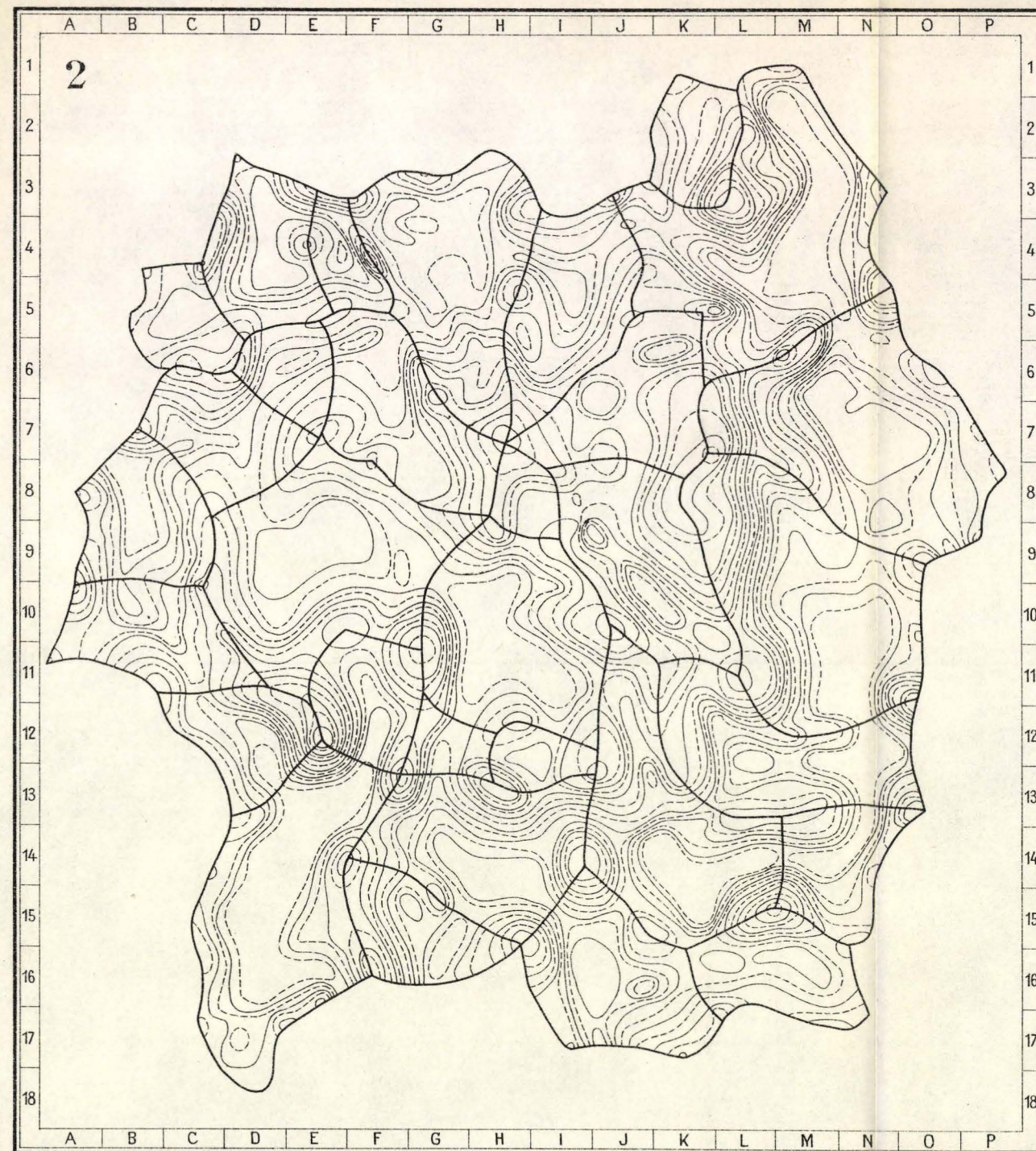


Plate XXVI.

## Plate XXVI.

Fig. 1. Photograph of the western part of the depression above the interglacial bog at Römstedt I, seen from the north. In the background, and on the right of the picture, the edge of the plateau is seen; in the middle on the left the recent bog and the small pool.

Fig. 2. South-eastern corner of the kieselgur-pit at Neu-Ohe I. On the right, the basin sand with highly inclined strata, on the left, strata of sandy kieselgur pressed upward. Detail of the portion on the extreme left of the profile Pl. XXIX.



WENDT & JENSEN repr.

1

K. von Bülow photo. 1927.



WENDT & JENSEN repr.

2

KNUD JESSEN photo. 1927.



Plate XXVII.

## Plate XXVII.

The interglacial bogs at Römstedt I and Römstedt II.

Fig. 1. Profile of the bog at Römstedt I.

Fig. 2. Profile of the bog at Römstedt II.

### Explanation of the signs.

- |                       |                          |
|-----------------------|--------------------------|
| 1. Mould and Rubbish. | 5. Clay Mud.             |
| 2. Sand.              | 6. Detritus Mud.         |
| 3. Sand with stones.  | 7. <i>Sphagnum</i> Peat. |
| 4. Sandy Clay.        | 8. <i>Hypnum</i> Peat.   |

Fig. 3. Sketch map showing the situation with the depressions above the two interglacial bogs and the position of the borings in these.

..... indicates the presumed extent of the interglacial deposits.

— 1.7 m —	} Isohypsies for 1.7 m, 3.3 m and 5.0 m above the level of the pool.
— 3.3 m —	
— 5.0 m —	

The fat broken lines show the position of the short, steep slopes (cf. the text, p. 283 and 288).

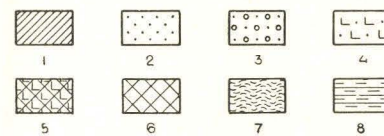
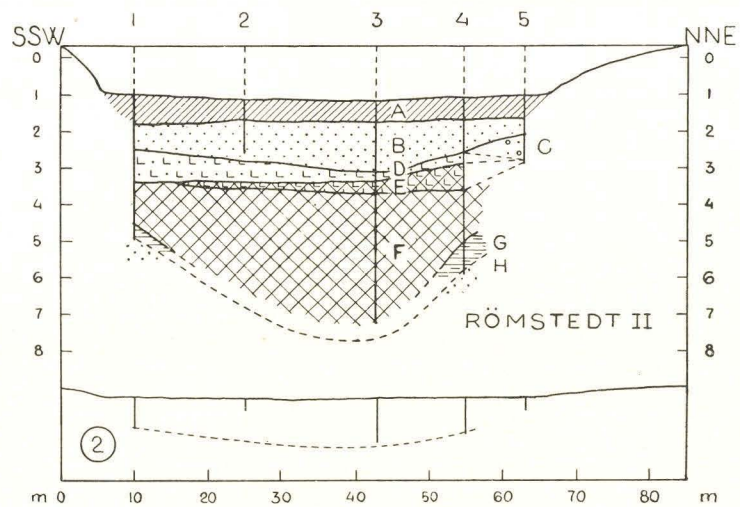
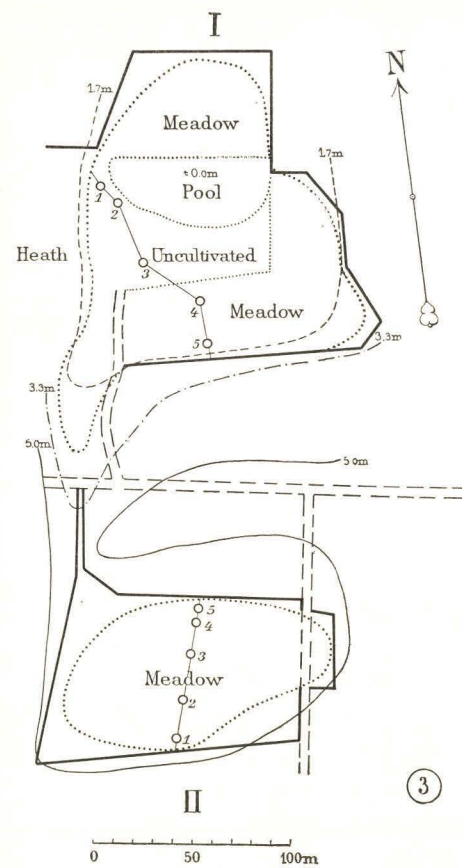
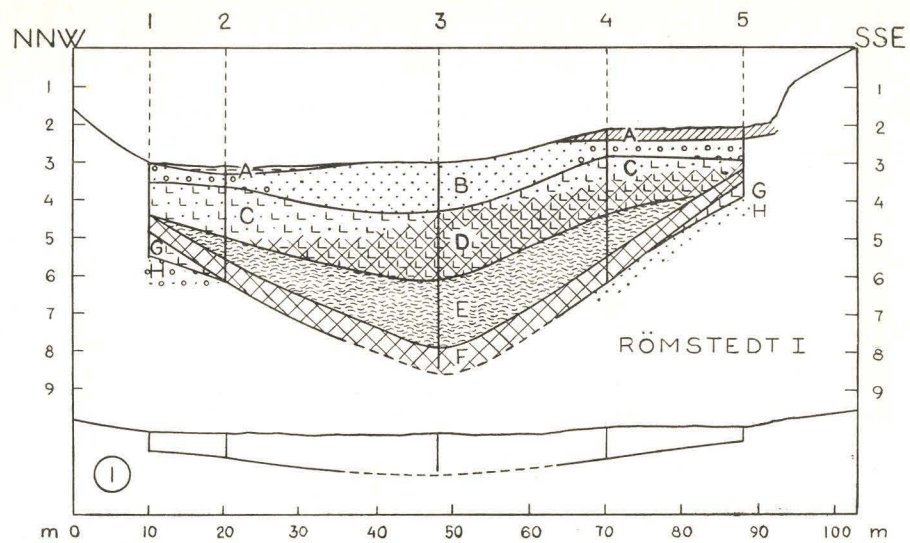


Plate XXVIII.

## Plate XXVIII.

Photograph of the western part of the north wall in the kieselgur-pit at Ober Ohe; showing the stratified basin sand above the kieselgur, which crops out in the foreground.



WENDT & JESSEN repr.

KNUD JESSEN photo. 1927.

Plate XXIX.

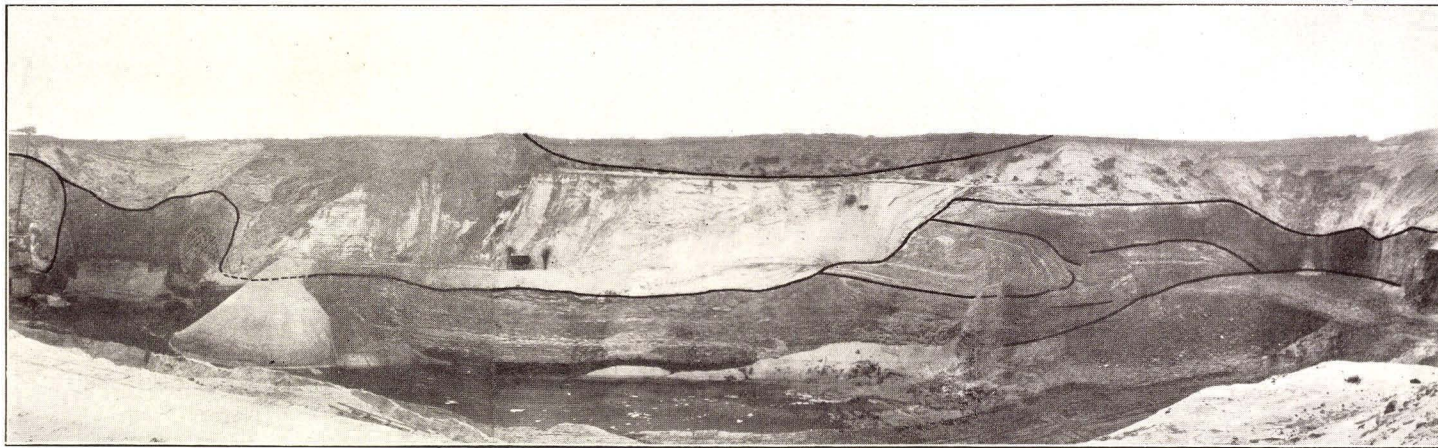
## Plate XXIX.

Photograph of the southern wall of the kieselgur-pit at Neu-Ohe I. Uppermost, moraine and fluviglacial sand, below this, basin sand and kieselgur. Cf. Pl. XXVI, 2.



D. G. U. II R. Nr. 48.

Pl. XXIX.



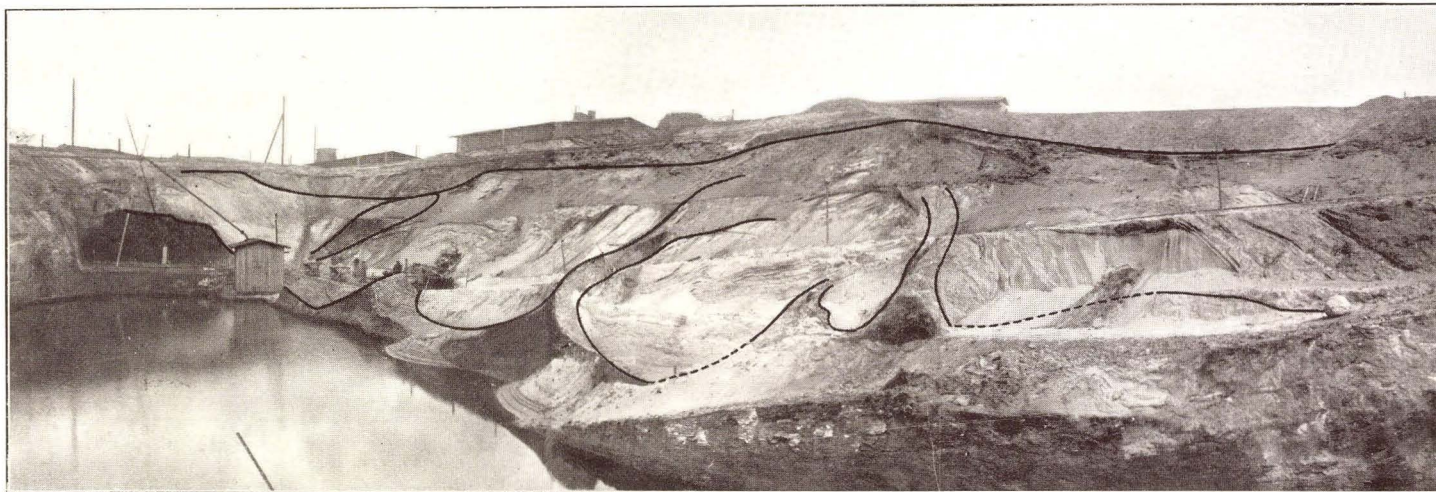
WENDT & JESSEN repr.

KNUD JESSEN photo. 1927.

Plate XXX.

### Plate XXX.

Photograph of the eastern wall of the kieselgur-pit at Neu-Ohe II. Under the fluvioglacial sand at the top is seen basin sand with portions folded up of the kieselgur, the undisturbed portions of which are seen at the bottom of the pit.



WENDT & JENSEN repr.

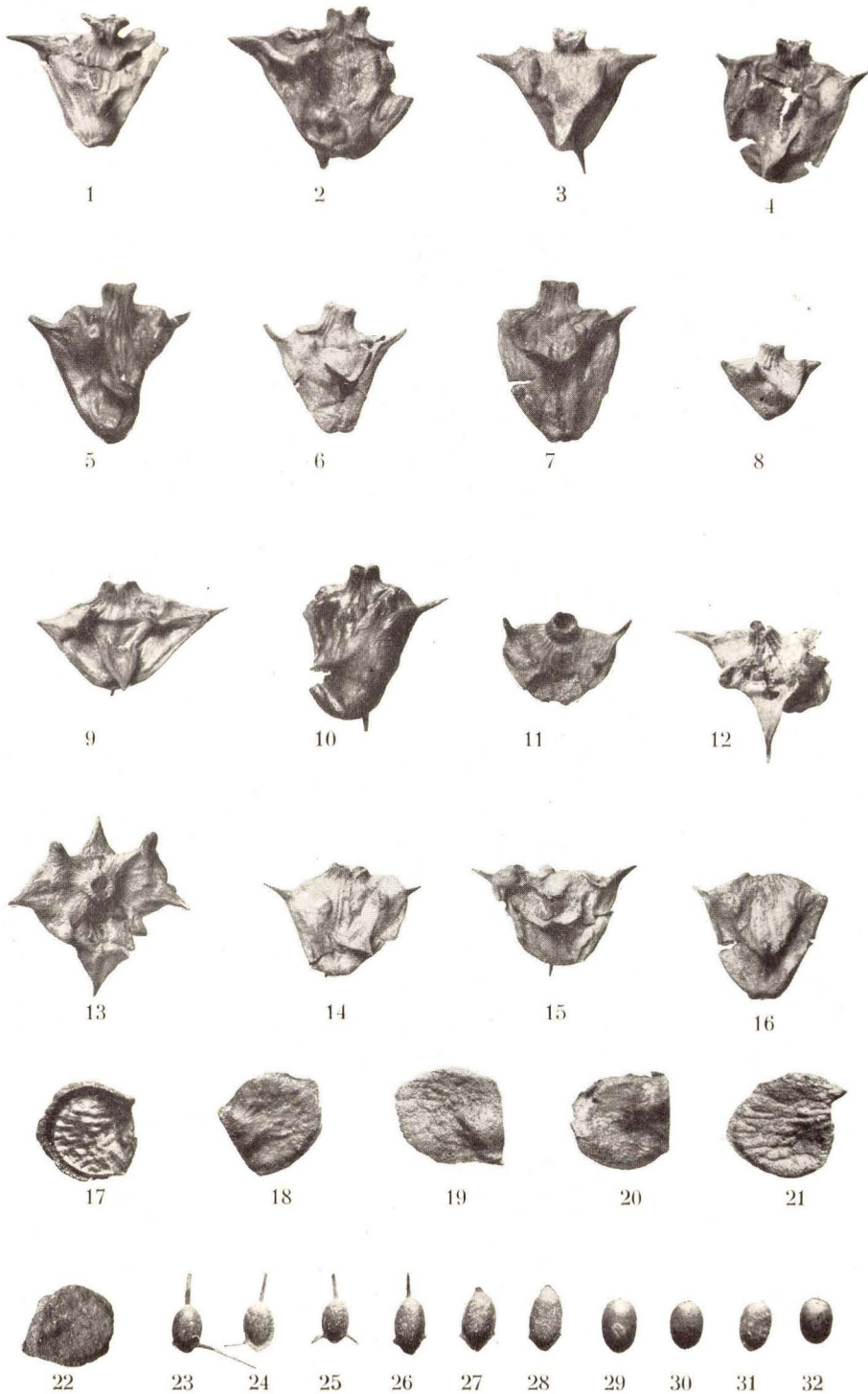
KNUD JESSEN photo. 1927.

Plate XXXI.

## Plate XXXI.

### Plants from various interglacial deposits.

- Fig. 1—16. *Trapa natans* L., fruits.  $\frac{1}{1}$ . Herning Brickworks 1916. Text, p. 19 and p. 351.  
Fig. 1—5, *f. coronata* NATH.  
Fig. 6—8, *f. rostrata* NATH.  
Fig. 9—13, *f. sub-rostrata*.  
Fig. 14—16, *f. laevigata* NATH.
- Fig. 17—21. *Acer campestre* L., fruits without wings.  $\frac{18}{10}$ . Herning Brickworks 1914. Text, p. 18.  
Fig. 17 shows the inner side of the carpel-wall.
- Fig. 22. *Acer platanoides* L., a fruit without wing.  $\frac{16}{10}$ . Nörbölling. Text, p. 74.
- Fig. 23—25. *Ceratophyllum demersum* L., fruits.  $\frac{17}{10}$ . Dalager Nygaard. Text, p. 137.
- Fig. 26—28. *Ceratophyllum demersum* var. *apiculatum* CHAM., fruits.  $\frac{17}{10}$ . Herning. Text, p. 39.
- Fig. 29—32. *Ceratophyllum submersum* L., fruits.  $\frac{17}{10}$ . Rødebæk I. Text p. 98.



WENDT & JENSEN repr.

S. BENGTSOON photo.

## Plate XXXII.

### Plants from various interglacial deposits.

- Fig. 1. *Hypochoeris radicata* L., a fruit.  $\frac{8}{1}$ . Herning. Text, p. 39.  
Fig. 2—3. *Myriophyllum verticillatum* L., floral leaves.  $\frac{8}{1}$ . Solsö. Text p. 115.  
Fig. 4—6. — *alterniflorum* D. C., fruits.  $\frac{8}{1}$ . Herborg II. Text, p. 126.  
Fig. 7. *Montia lamprosperma* CHAM., a seed.  $\frac{8}{1}$ . Fövling. Text, p. 155.  
Fig. 8—9. *Litorea uniflora* (L.) ASCHERSON, nuts.  $\frac{8}{1}$ . Herning. Text, p. 39.  
Fig. 10—12. *Eriophorum vaginatum* L., fruits.  $\frac{8}{1}$ . Agerskov. Text, p. 173.  
Fig. 13—14. *Oxycoccus palustris* PERS., seeds.  $\frac{8}{1}$ . Agerskov. Text, p. 173.  
Fig. 15. *Myosoton aquaticum* (L.) MOENCH, a seed.  $\frac{8}{1}$ . Rodebæk II. Text, p. 146.  
Fig. 16 18. *Ranunculus lingua* L. nuts.  $\frac{8}{1}$ . Solsö. Text, p. 107.  
Fig. 19. *Scleranthus perennis* L. (?), a calyx.  $\frac{8}{1}$ . Brörup Hotel Bog. Text, p. 87.  
Fig. 20. *Oenanthe* sp., an achene.  $\frac{8}{1}$ . Over Gestrup. Text, p. 169.  
Fig. 21. *Rhynchospora alba* (L.) VAHL, 6 fruits.  $\frac{8}{1}$ . Over Gestrup. Text, p. 160  
(The unevenness of the outlines of some of the figures is due to small air-bubbles in the glycerine in which the fruits lay when they were photographed).  
Fig. 22. *Patamogeton densus* L., a fruit-stone.  $\frac{8}{1}$ . Herborg II. Text, p. 126.  
Fig. 23—26. — *trichoides* CHAM. & SCHL., fruit-stones.  $\frac{8}{1}$ . Lervad. Text, p. 158.  
Fig. 27. *Patamogeton natans* L., a fruit-stone.  $\frac{8}{1}$ . Solsö. Text, p. 107.  
Fig. 28. — — — —  $\frac{8}{1}$ . Loopstedt. Text, p. 302.



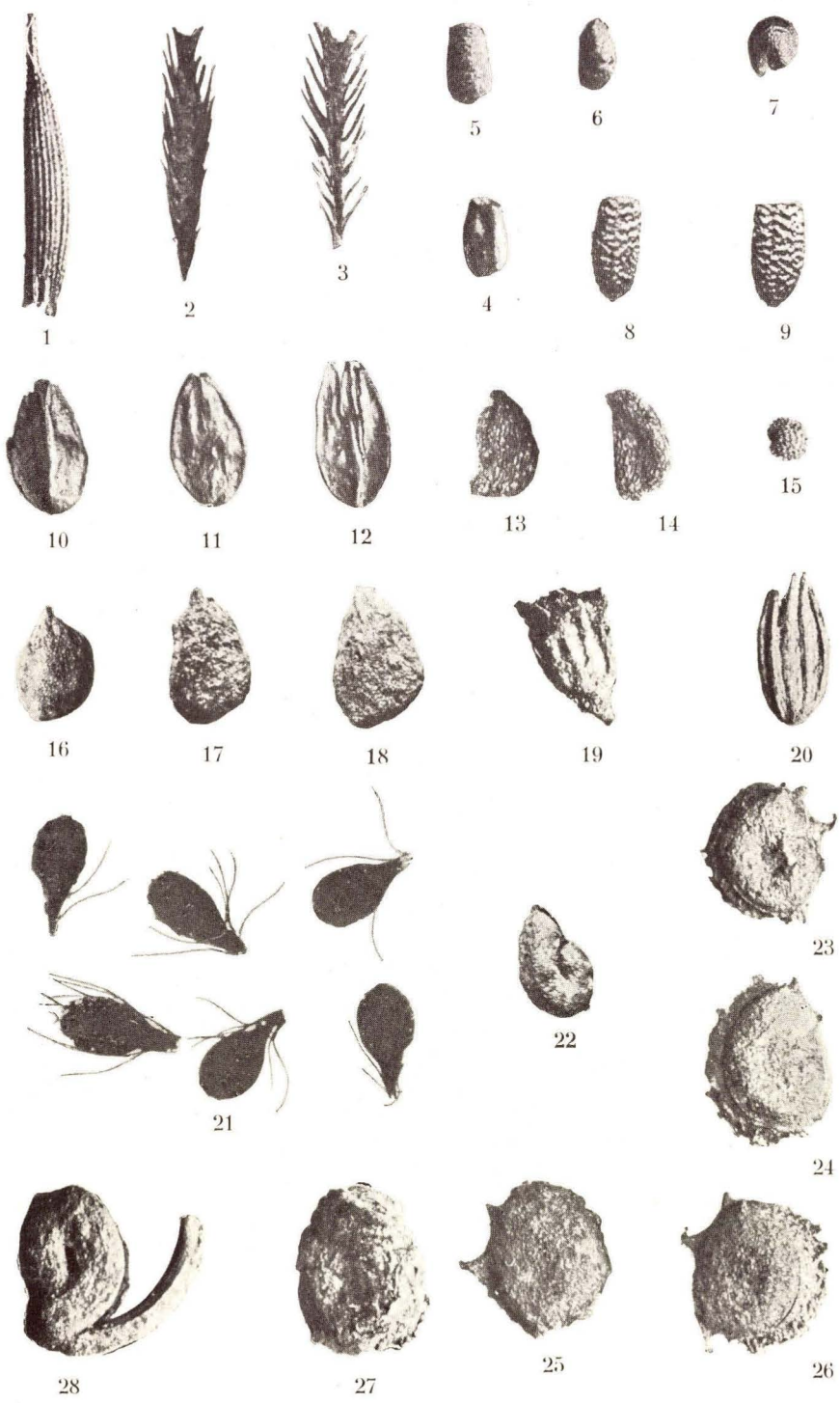
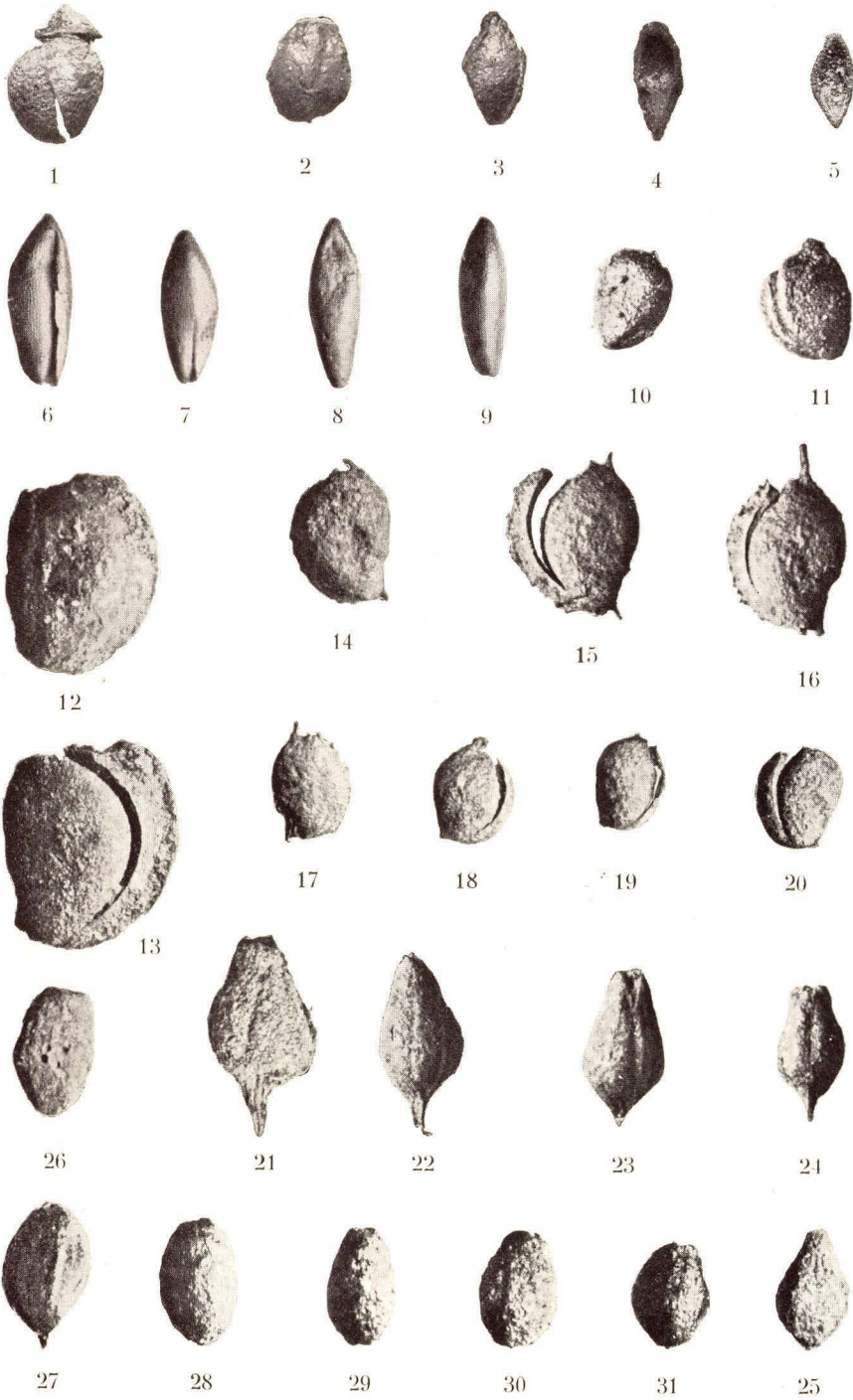


Plate XXXIII.

## Plate XXXIII.

### Plants from various interglacial deposits.

- Fig. 1—5. *Tilia platyphylla* SCOP., parts of fruits.  $\frac{2}{1}$ . Herning.  
Fig. 1—2, see Text, p. 39. Fig. 3—5, see Text, p. 19.
- Fig. 6—9. *Najas flexilis* (WILLD.) ROSTK. & SCHM., fruits.  $\frac{8}{1}$ . Nörböbling. Text,  
p. 71.
- Fig. 10—11. *Potamogeton filiformis* PERS., fruit-stones.  $\frac{8}{1}$ . Solsö. Text, p. 110.
- Fig. 12—13. — *praelongus* WULFEN, fruit-stones.  $\frac{8}{1}$ . Brörup Hotel  
Bog. Text, p. 87.
- Fig. 14—16. *Potamogeton alpinus* BALBIS, fruit-stones.  $\frac{8}{1}$ . Brörup Hotel Bog.  
Text, p. 87.
- Fig. 17—20. *Potamogeton pusillus* L., fruit-stones.  $\frac{8}{1}$ . Brörup Hotel Bog. Text,  
p. 87.
- Fig. 21. *Sparganium simplex* HUDSON, a fruit-stone.  $\frac{8}{1}$ . Solsö. Text, p. 116.
- Fig. 22—24. — *minimum* FR., fruit-stones.  $\frac{8}{1}$ . Rodebæk I. Text, p. 97.
- Fig. 25. — — fruit-stone.  $\frac{8}{1}$ . Lervad. Text, p. 158.
- Fig. 26. — *affine* SCHNIZLEIN, a fruit-stone.  $\frac{8}{1}$ . Herborg I. Text,  
p. 123.
- Fig. 27. *Sparganium affine*, a fruit-stone.  $\frac{8}{1}$ . Herning. Text, p. 20.
- Fig. 28—31. — — fruit-stones.  $\frac{8}{1}$ . Rodebæk I. Text, p. 97.



## Plate XXXIV.

### Plants from Herning a. o.

- Fig. 1—3. *Salix herbacea* L., leaves. Fig. 1.  $\frac{44}{10}$ . Text, p. 20. Fig. 2—3.  $\frac{7}{1}$ . Text, p. 45.
- Fig. 4. A Bract.  $\frac{7}{1}$ . Boring 39, Stratum G. Text, p. 45.
- Fig. 5—6. *Salix phylicifolia* L., leaves.  $\frac{4}{1}$ . Text, p. 20.
- Fig. 7—8. — *cf. repens* L., leaves. Fig. 7.  $\frac{43}{10}$ . Fig. 8.  $\frac{78}{10}$ . Text, p. 21.
- Fig. 9. — *reticulata* L., a leaf.  $\frac{4}{1}$ . Text, p. 21.
- Fig. 10—11. *Cf. Origanum vulgare* L. A nut seen from the dorsal side (Fig. 10) and from the ventral (Fig. 11).  $\frac{22}{1}$ . Lervad. Text, p. 158.

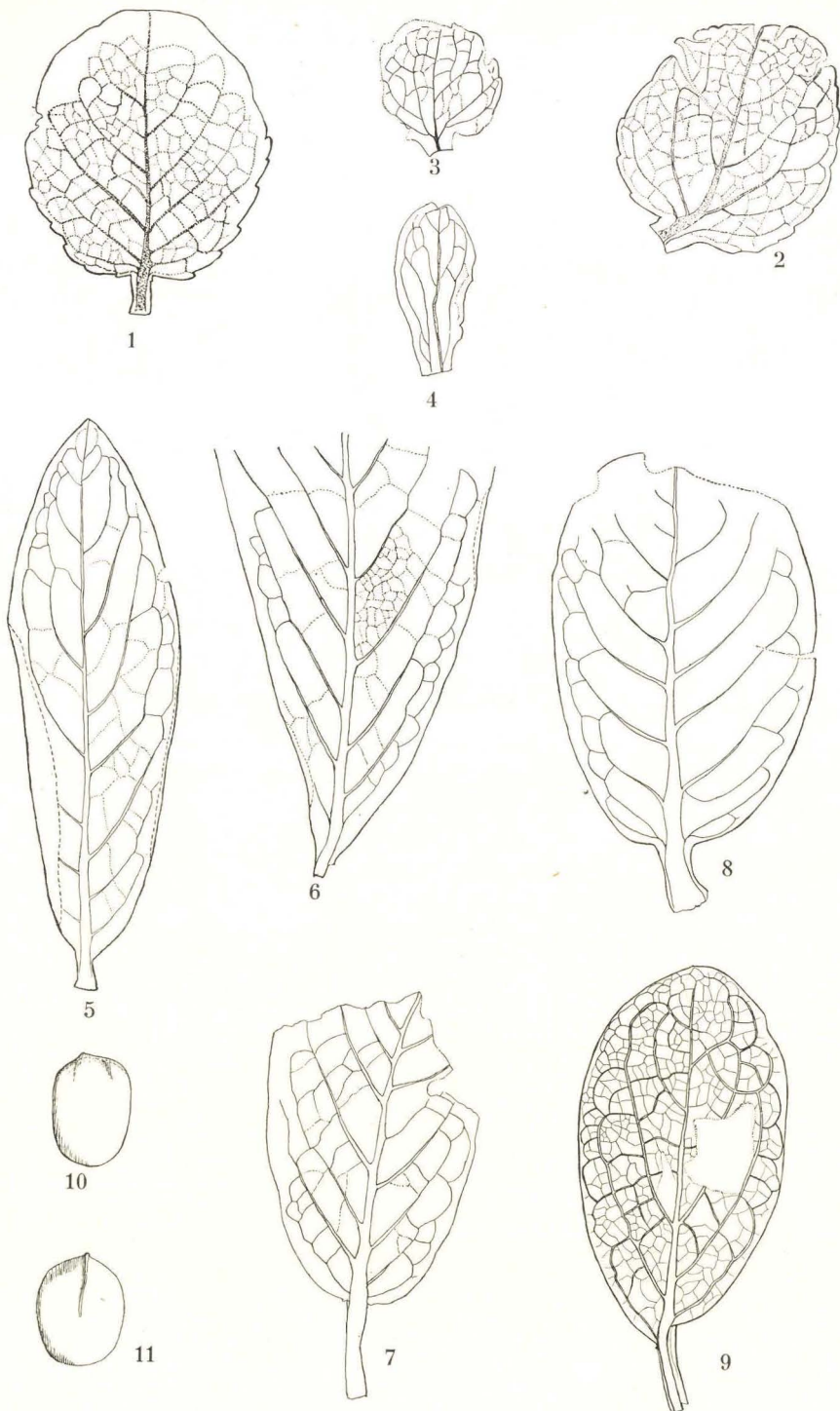


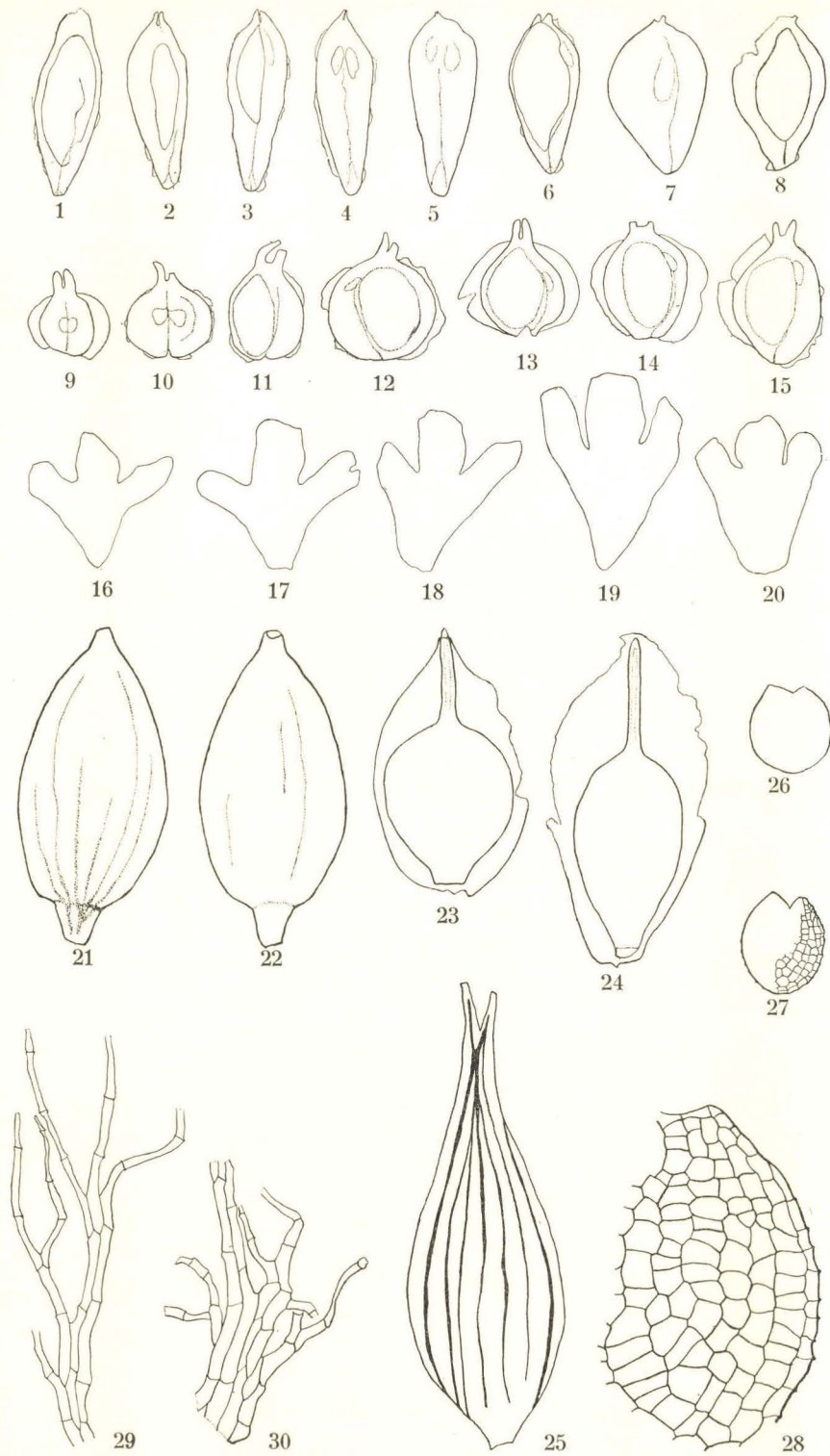
Plate XXXV.

## Plate XXXV.

### Plants from various interglacial deposits.

- Fig. 1— 5. *Betula pendula* ROTH., fruits without wings.  $^{11}/_1$ . Solsö. Fig. 1 - 2, see Text, p. 107. Fig. 3—5, see Text, p. 110.
- Fig. 6. *Betula cf. pendula* ROTH  $\times$  *pubescens* EHRH., a fruit.  $^{11}/_1$ . Solsö. Text, p. 107.
- Fig. 7— 8. *Betula pubescens* EHRH., fruits.  $^{11}/_1$ . Solsö. Text, p. 107.
- Fig. 9—10. — *nana* L., fruits.  $^{11}/_1$ . Solsö. Text, p. 110.
- Fig. 11—14. — — fruits.  $^{11}/_1$ . Herning. Text, p. 20.
- Fig. 15. — —  $\times$  *pubescens*, a fruit.  $^{11}/_1$ . Herning. Text, p. 20.
- Fig. 16—18. — — catkin scales.  $^{11}/_1$ . Herning. Text, p. 20.
- Fig. 19—20. — —  $\times$  *pubescens*, catkin scales.  $^{11}/_1$ . Herning. Text, p. 20.
- Fig. 21—22. *Carex caespitosa* L., a fruit.  $^{18}/_1$ . Fig. 21 dorsal view, Fig. 22 ventral view. Rodebæk I. Text, p. 95.
- Fig. 23 24. *Carex sp.* Two flattened fruits in nerveless, thin utriculi.  $^{16}/_1$ . Herborg II. Text, p. 125.
- Fig. 25. *Carex pseudocyperus* L., a fruit.  $^{15}/_1$ . Tuesböl II. Text, p. 160.
- Fig. 26—28. *Nasturtium aquaticum* (L.) KARST. Rodebæk I. Text, p. 146.  
Fig. 26—27, two campylotrophic seeds.  $^{16}/_1$ . The highly alveolated surface of the seed wall indicated in one of the figures. Fig. 28, alveolated surface of the seed wall more highly magnified.  $^{55}/_1$ .
- Fig. 29—30. *Trichocolea tomentella* (EHRH.), ciliated fringes from the edge of a leaf.  $^{135}/_1$ . Width of Threads, 13—26,7  $\mu$ . Rodebæk III. Text, p. 147.





## Plate XXXVI.

### Pollen Diagrams from interglacial deposits of the Herning Type.

- Fig. 1. Herning. Boring 4. See Text, p. 24 and Pl. VIII.  
 Fig. 2. — — 9. — Text, p. 28 — Pl. VIII.  
 Fig. 3. Nörbölling. Boring 4. See Text, p. 64 and Pl. XI.  
 Fig. 4. — — 15. — Text, p. 71 — Pl. XI.  
 Fig. 5. — — 19. — Text, p. 72 — Pl. XI.  
 Fig. 6. — — 20. — Pl. XI.  
 Fig. 7. Brörup Hotel Bog. Boring 3. See Text, p. 83 and Pl. XIII.  
 Fig. 8. Rodebæk I. Boring 5. See Text, p. 92 and Pl. XV.  
 (Spectr. 17 is from Boring 3, 6.4 m below surface).

#### Explanations of Pollen Diagrams.

The letters in the column on the extreme left are those used in the profile descriptions in the text to denote the various strata.

The scale shows the distance in metres below the surface.

The different beds are indicated in the same way as in the profile drawings; see also descriptions of the strata in text.

For explanation of the signs referring to pollen, see below.

- ⊕— *Salix*
- *Betula*
- *Pinus*
- ..... *Ulmus*
- *Tilia*
- *Quercus*
- *Mixed Oak Forest (Quercus + Ulmus + Tilia)*
- *Alnus*
- ▽— *Carpinus*
- △— *Picea*
- ×— *Abies*
- *Corylus*

A curve for pollen frequency (see text p. 12–13) is given on the right, inside the margin of the diagrams, the right side of which constitutes the abscissa.

The serial numbers of the pollen spectra, and the small letters denoting the floristic zones are placed outside the margin on the right.

The analyses to the pollen diagrams of Nörbölling Boring 19, Brörup Hotel Bog, Solsö, Duedam I, Hörup and Kollund are wholly or in part made by SIGURD HANSEN and KELD MILTHERS under the superintendence of KNUD JESSEN, to whom the remaining pollenanalytical work is due.

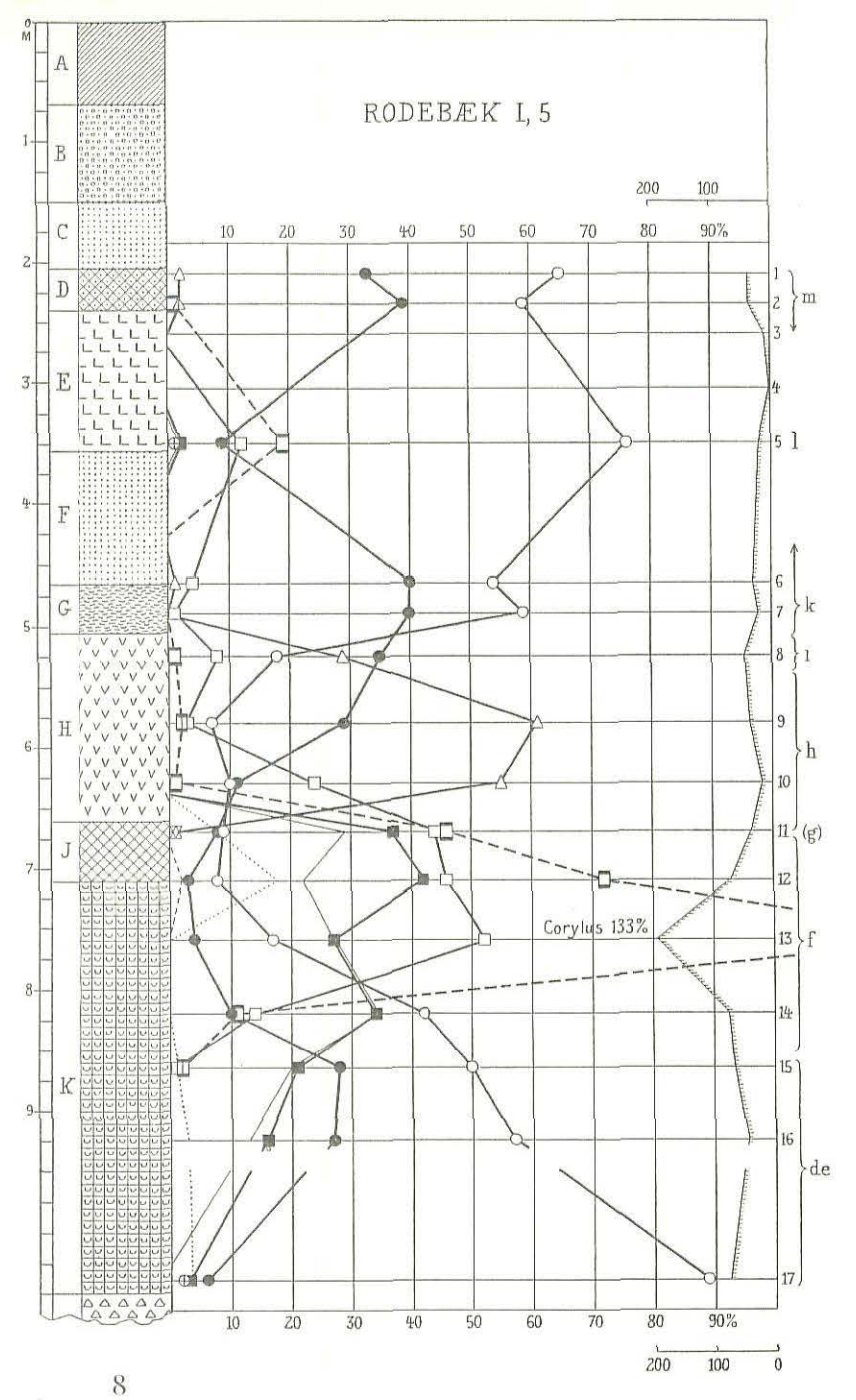
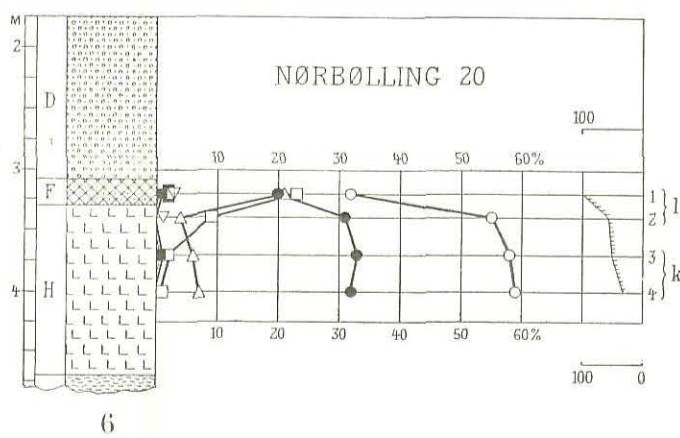
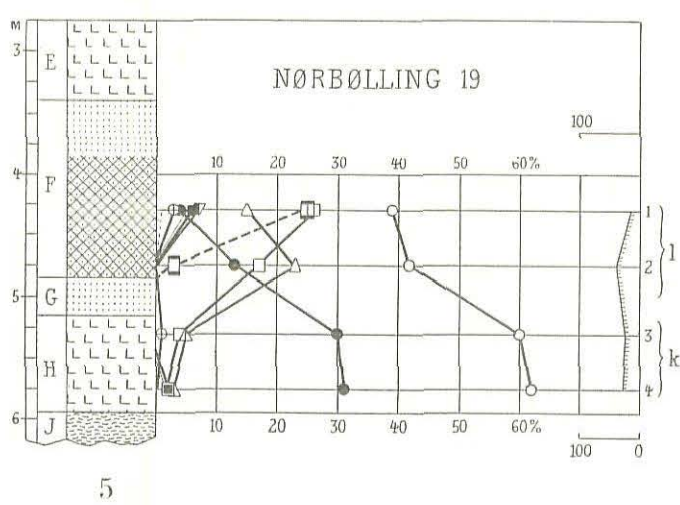
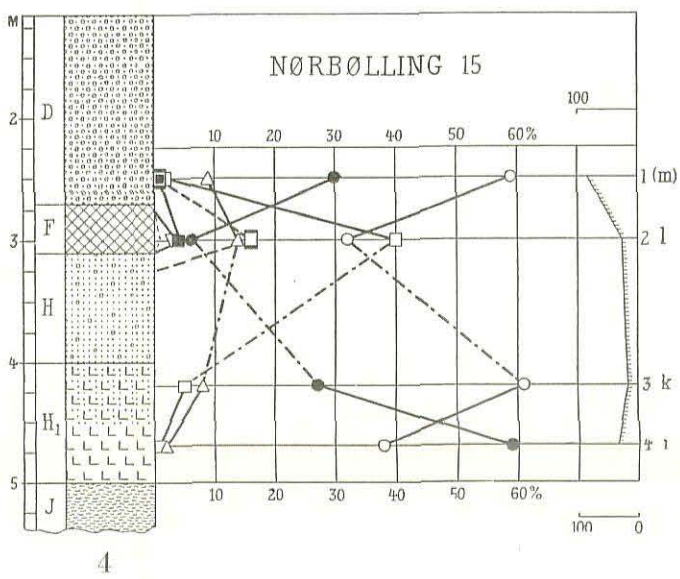
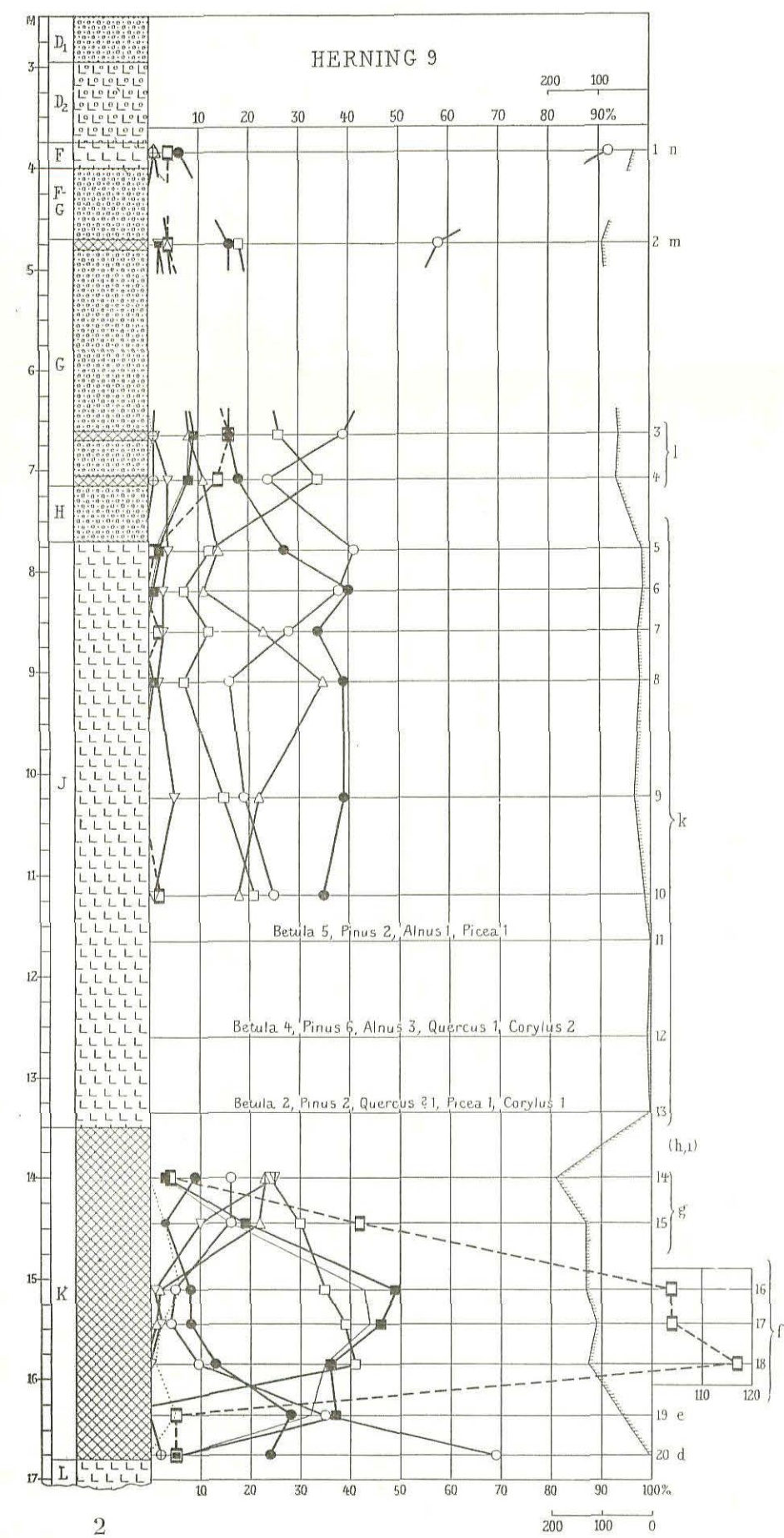
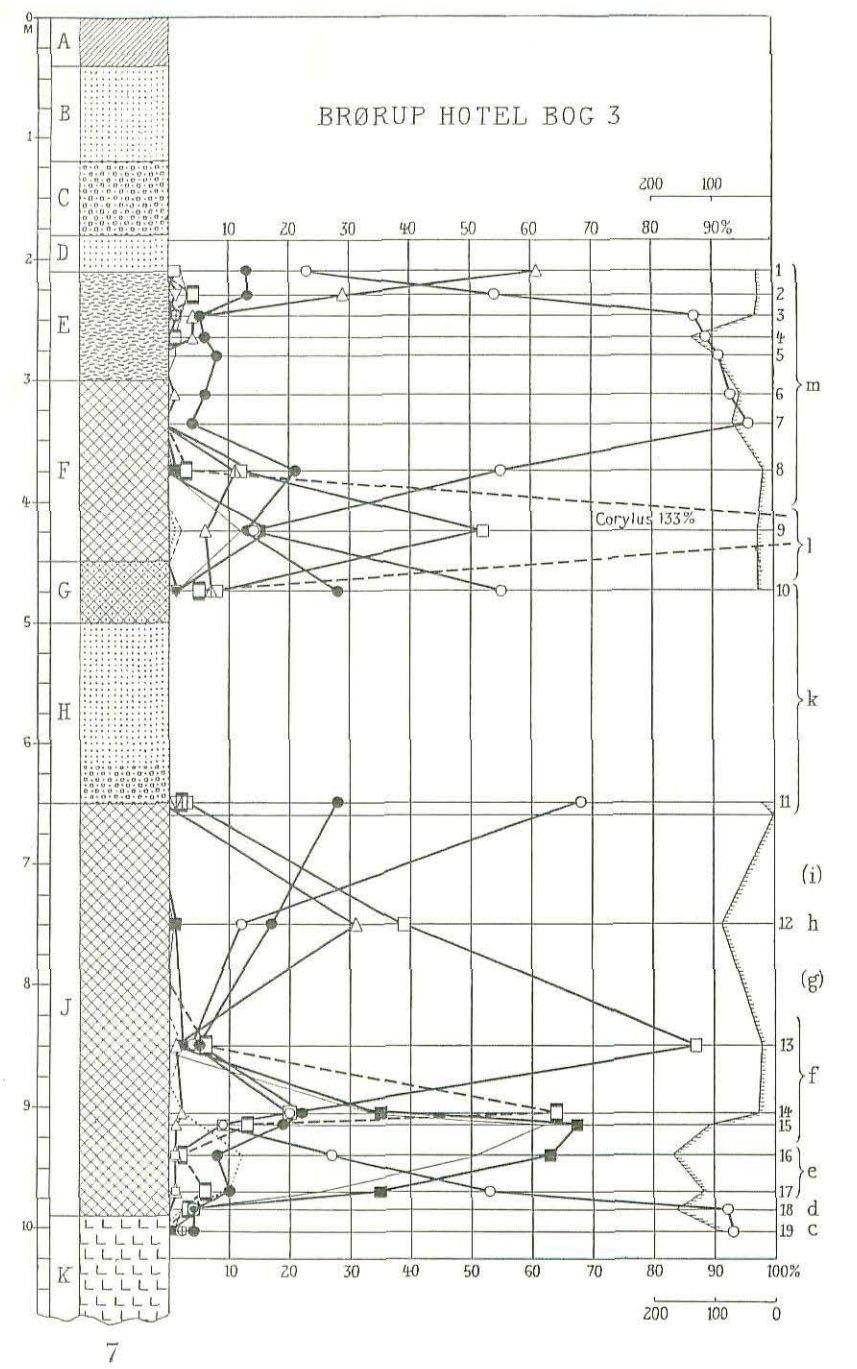
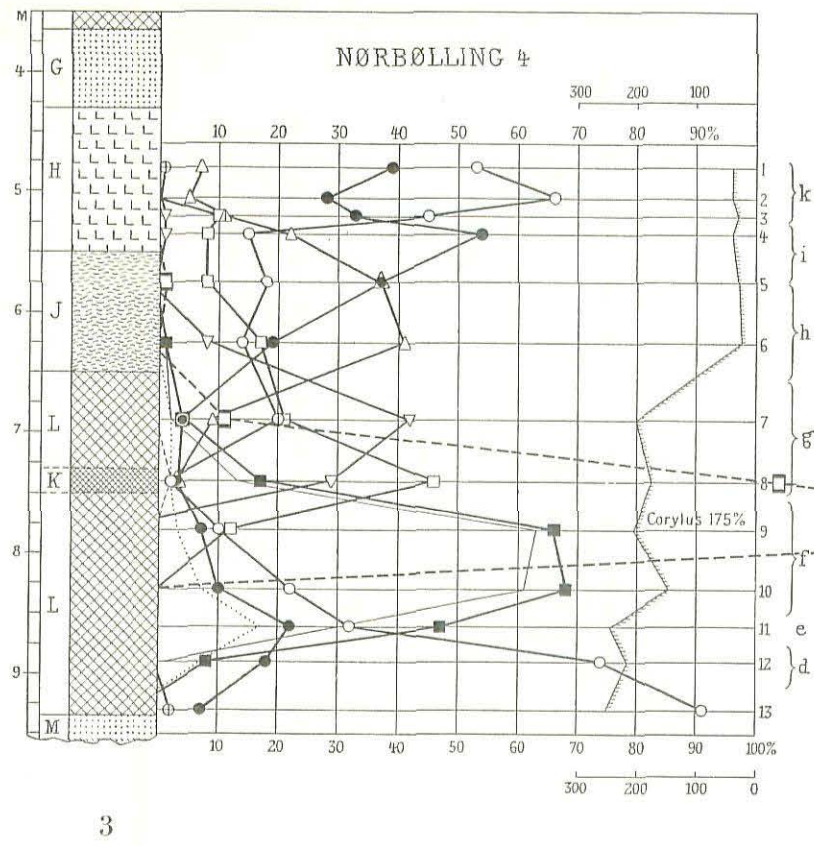
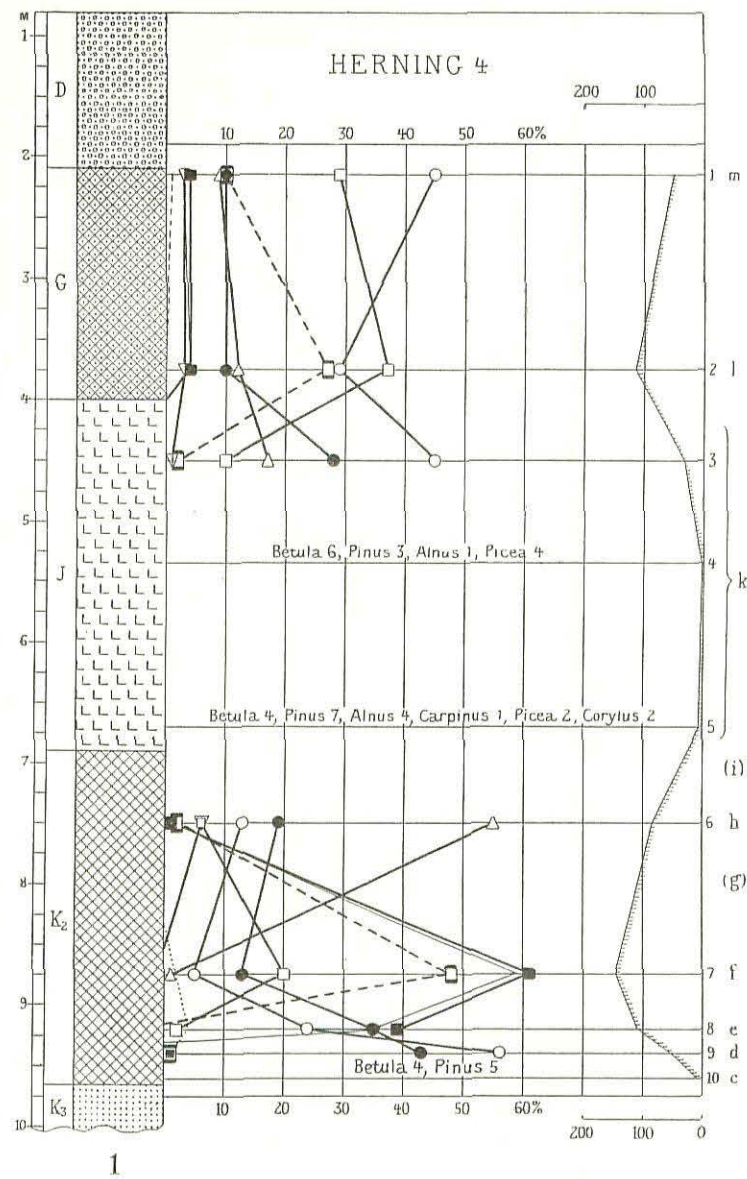


Plate XXXVII.

## Plate XXXVII.

### Pollen Diagrams from interglacial bogs of the Brörup Type in Jutland.

- Fig. 1. Fövling. See Text, p. 153.
- Fig. 2. Duedam I. See Text, p. 128.
- Fig. 3. Rodebæk II. Boring 2. See Text, p. 145.
- Fig. 4. Rodebæk III. See Text, p. 147.
- Fig. 5. Höllund Sögaard. See Text, p. 149.
- Fig. 6. Over Gestrup. See Text, p. 168.
- Fig. 7. Solsö. Borings 15a and 10 (spectra 5 and 6 from Boring 10). See Text, p. 114 and Pl. XVII.
- Fig. 8. Brörup railway station. 1922. See Text, p. 163.
- Fig. 9. — — — 1922 and 1898. See Text, p. 162.

Pollen analyses 4—9 were made from samples collected by N. HARTZ in 1898; the Roman figures placed opposite them in the pollen diagram show from which of the zones mentioned by N. HARTZ (l. c. 1909) the respective samples are derived.

- Fig. 10. Tuesböl II. See Text, p. 159.

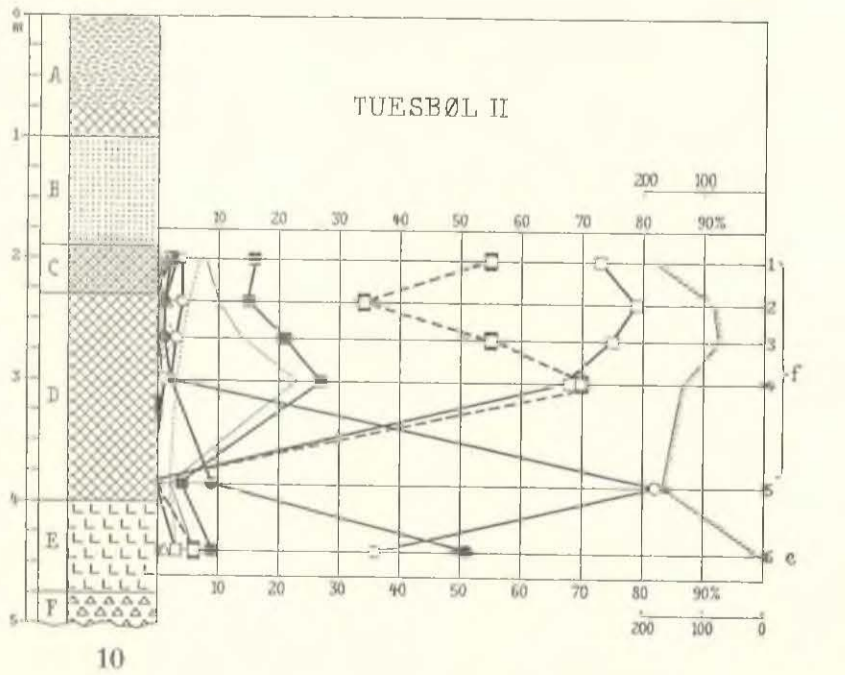
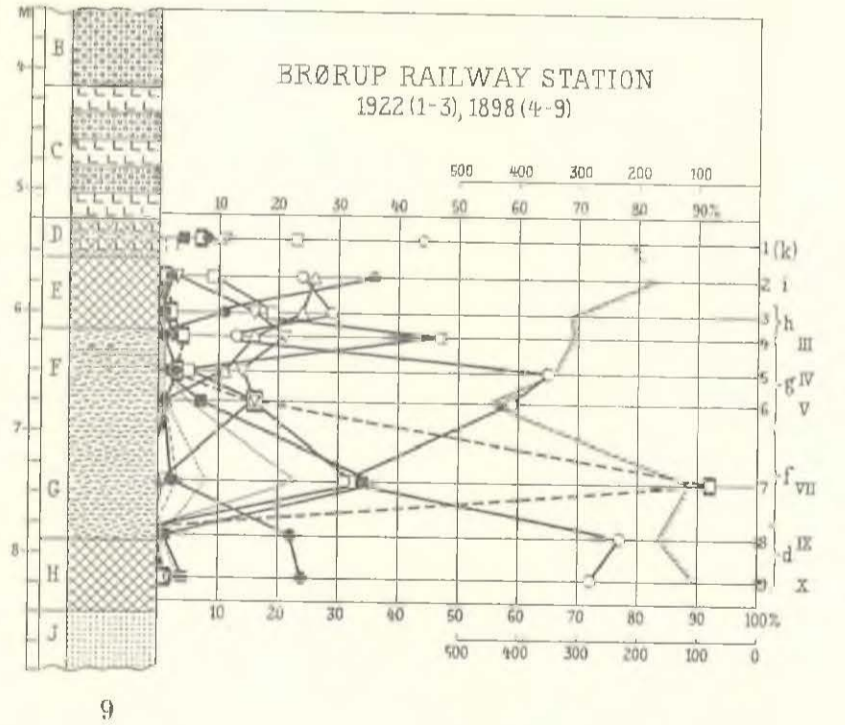
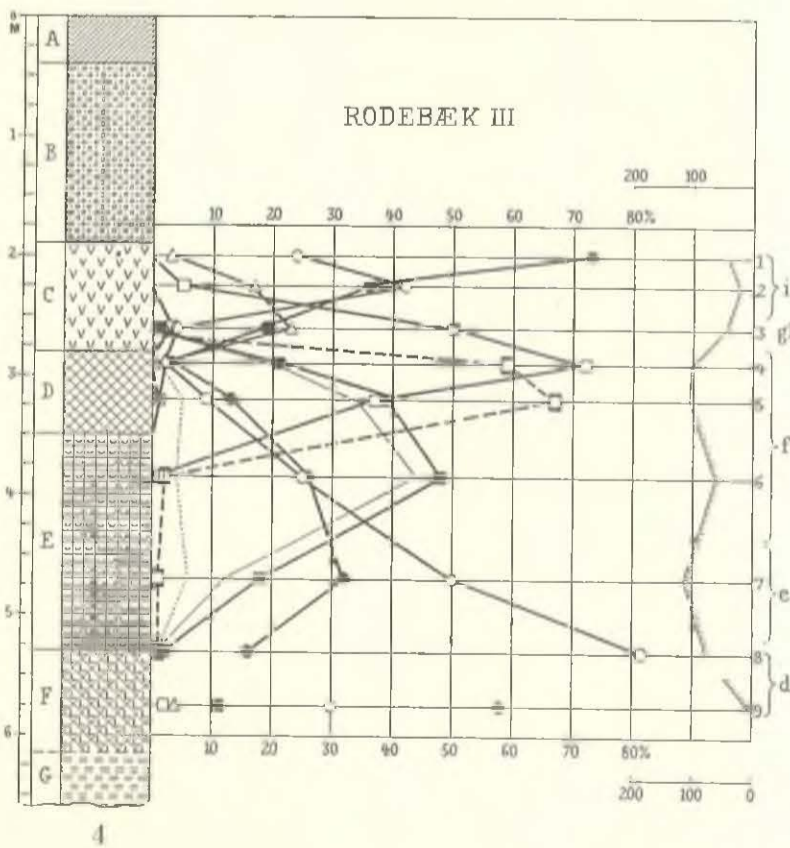
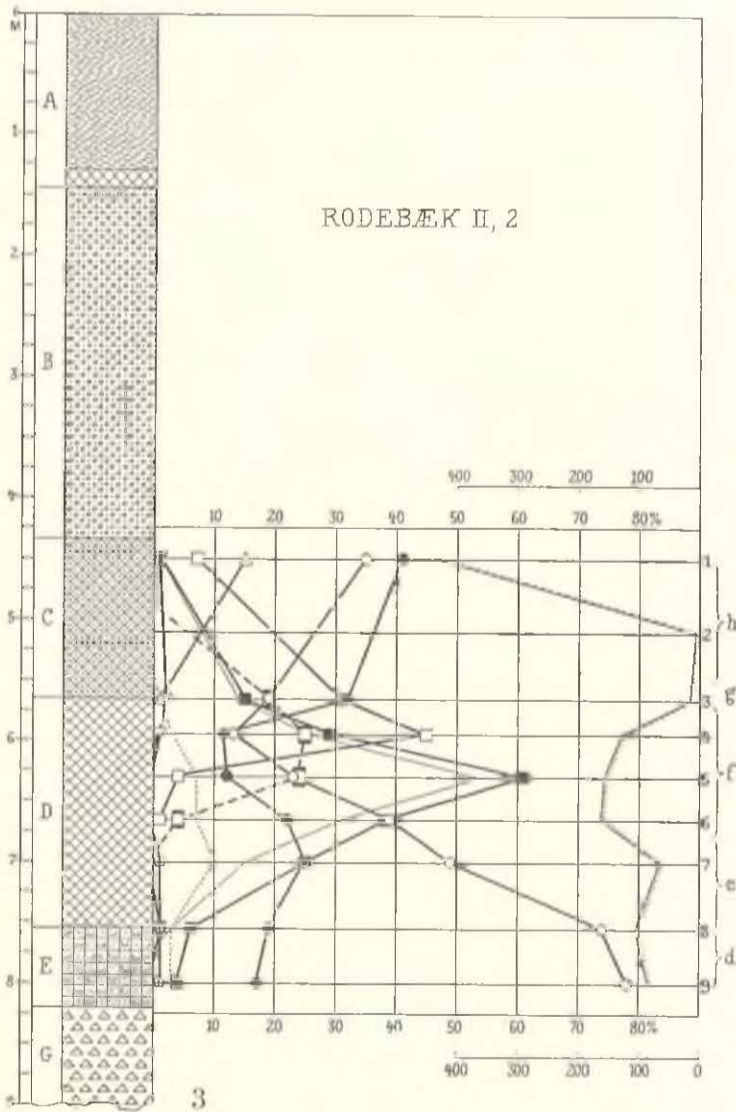
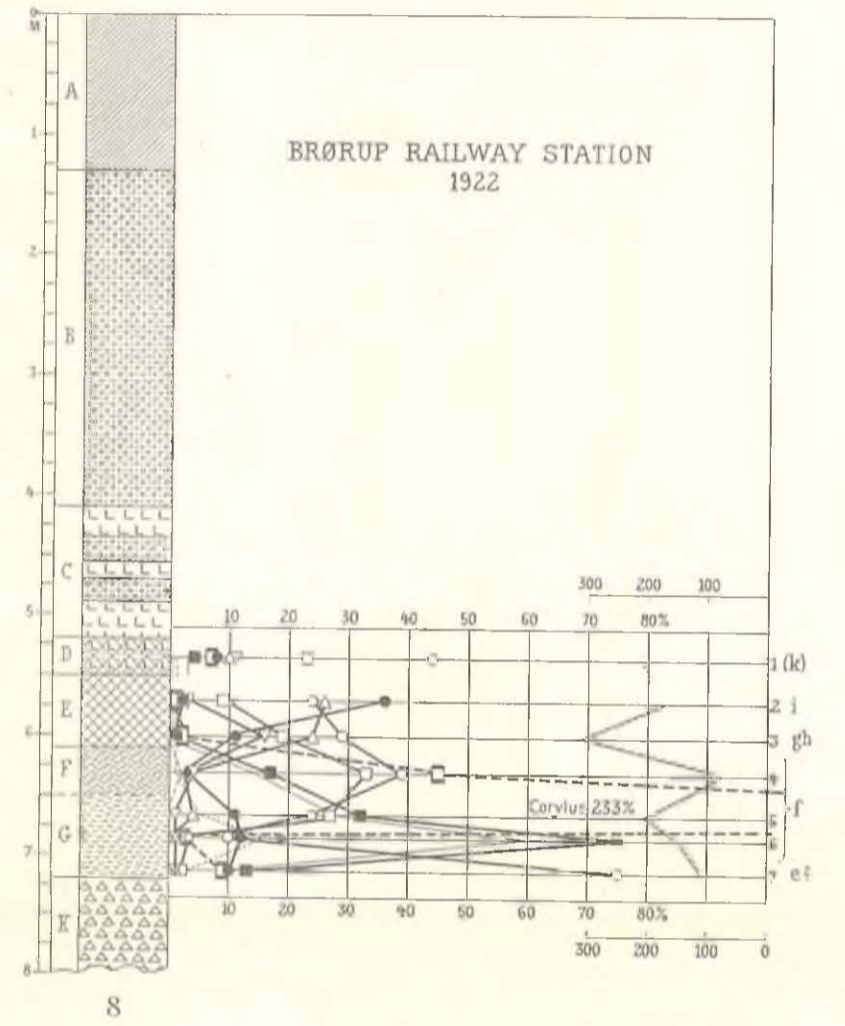
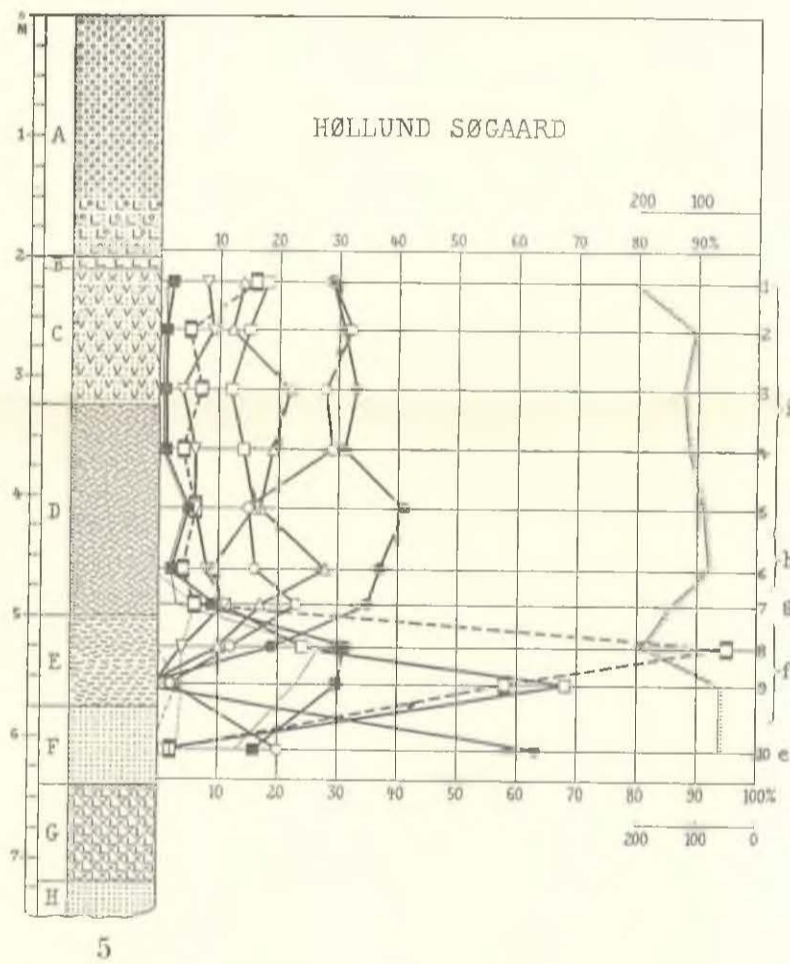
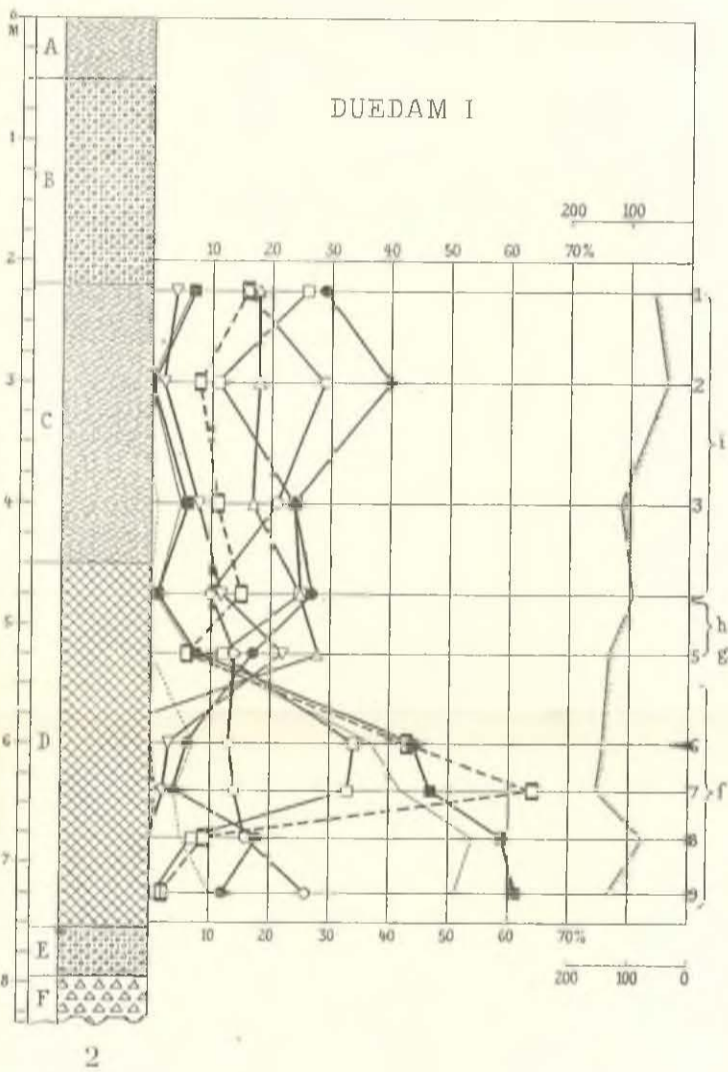
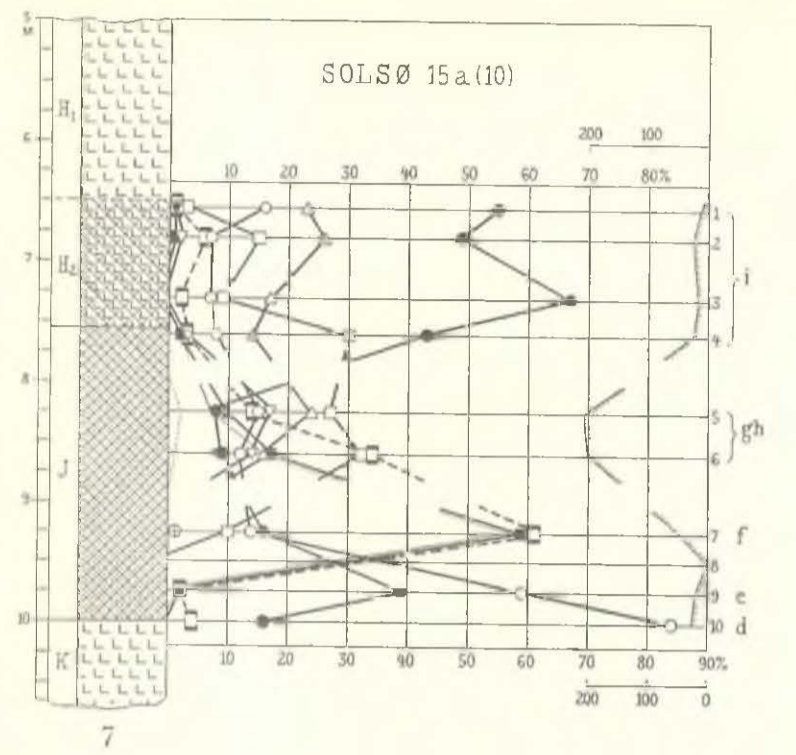
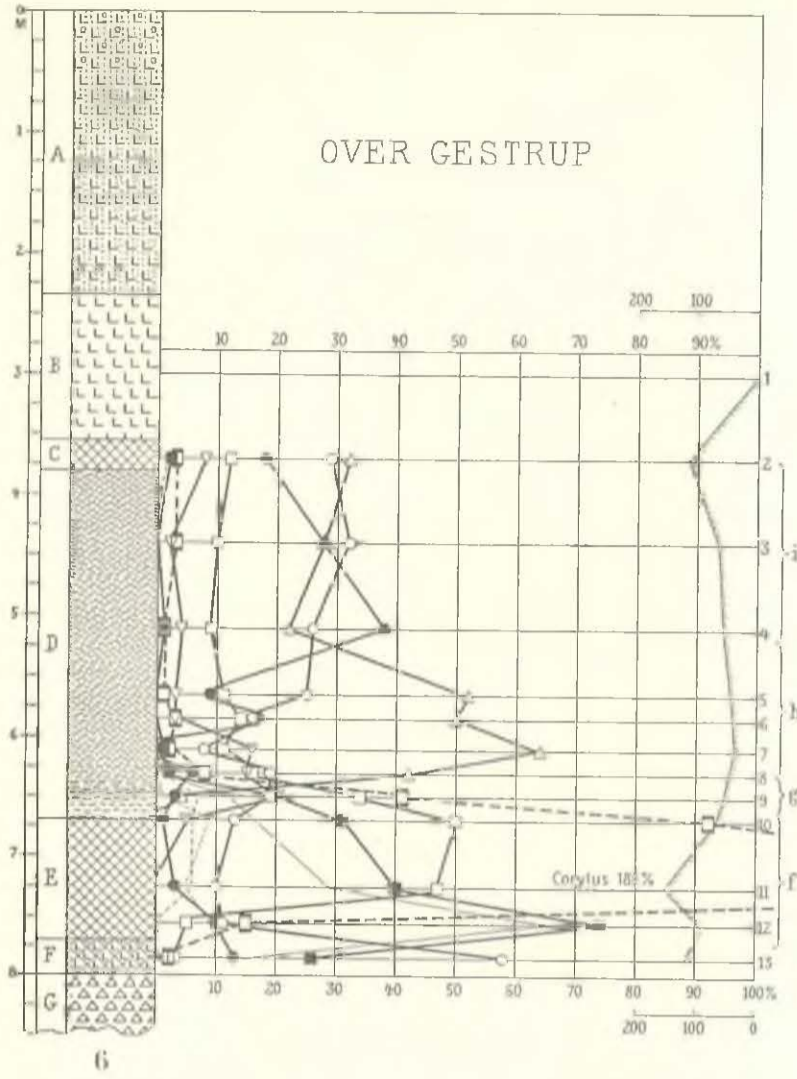
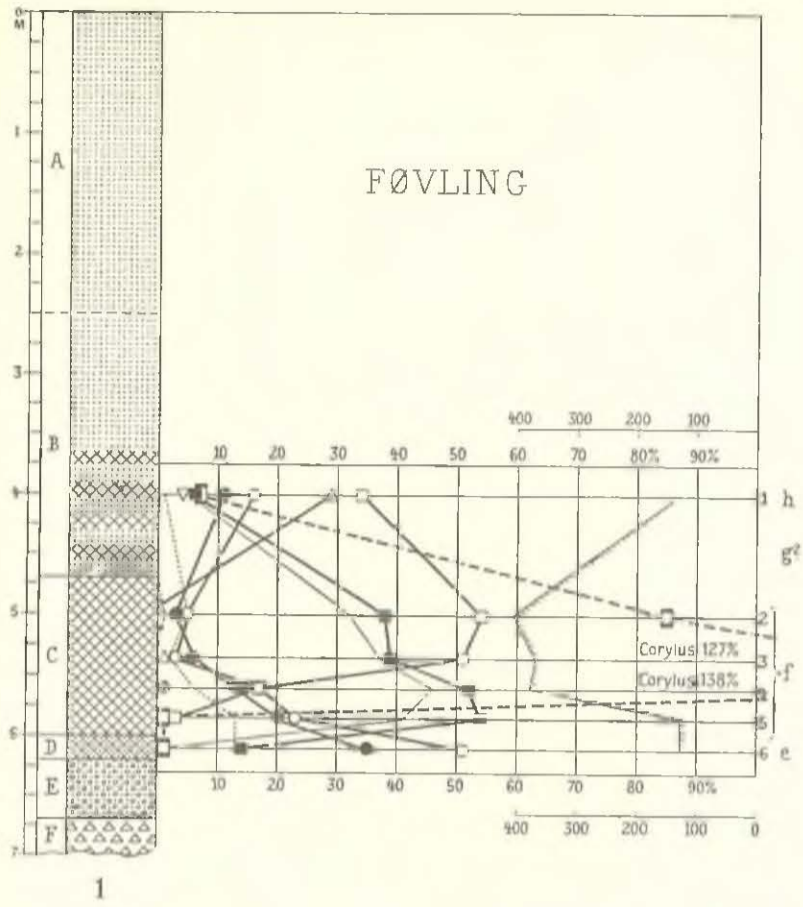


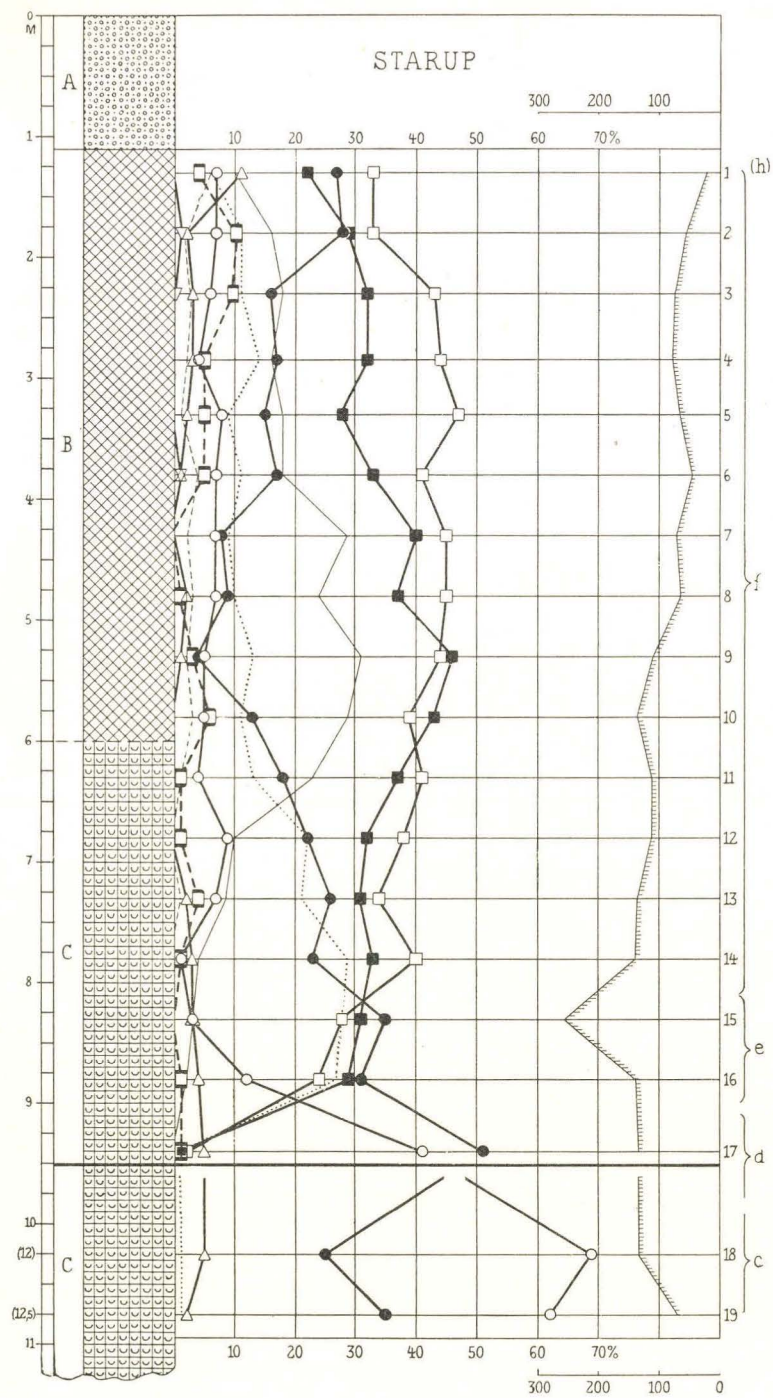
Plate XXXVIII.

## Plate XXXVIII.

Pollen Diagrams from deposits from the Penultimate  
interglacial period in Jutland.

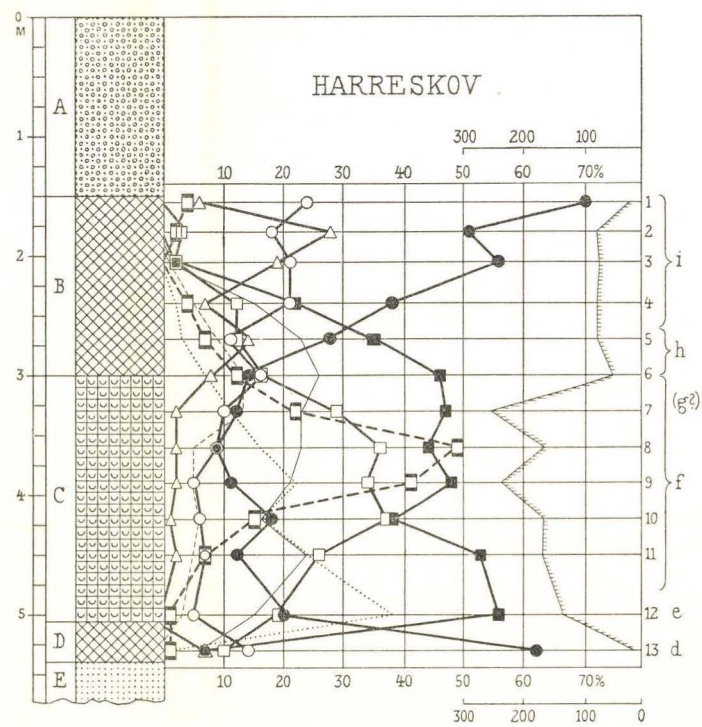
- Fig. 1. Starup. Spectra 1-17 from the boring 1925, Spectra 18-19 from the 1922 boring. See Text, p. 190.
- Fig. 2. Harreskov. See Text, p. 186 and Pl. XXII. Spectra 1-7 from Boring 1925, Spectra 18 and 19 from Boring 1922.





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Plate XXXIX.

## Plate XXXIX.

Pollen Diagrams from interglacial deposits in Jutland  
covered by young-glacial formations.

Fig. 1. Lövskal. See Text, p. 204 and Pl. XXIII.

Fig. 2. Kollund. See Text, p. 216.

Fig. 3. Egtved. See Text, p. 212 and Pl. XXIII. Spectra 2-16 are from Boring  
2, Spectrum 1 is from Boring 3.

Fig. 4. Hörup. See Text, p. 199.

Fig. 5. Hollerup. See Text, p. 207.

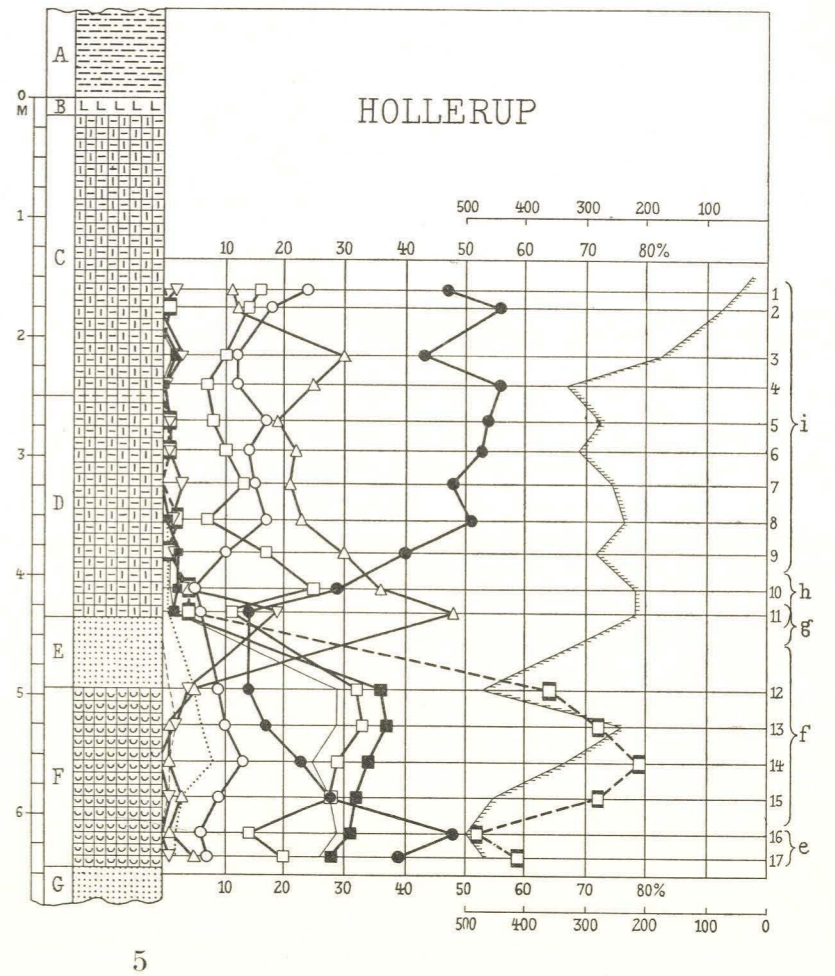
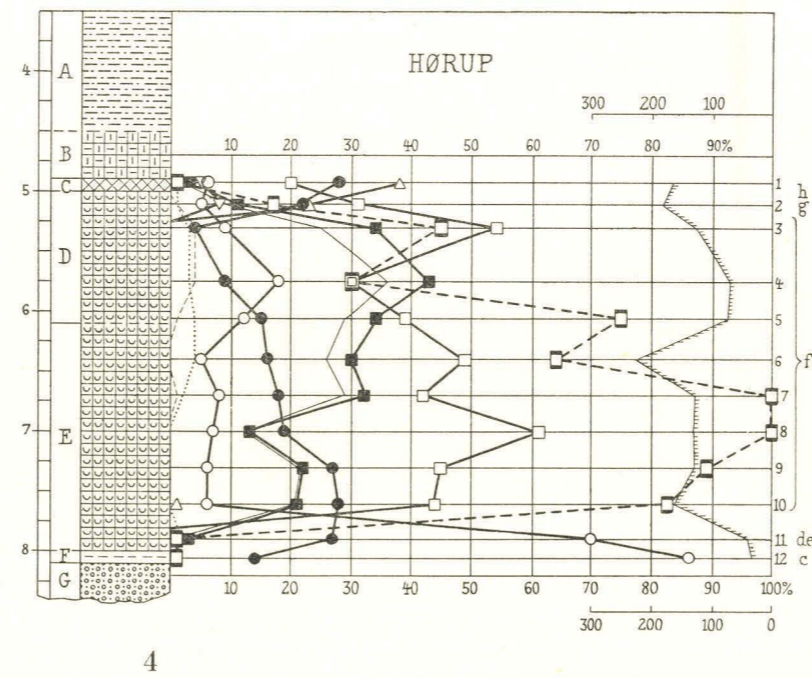
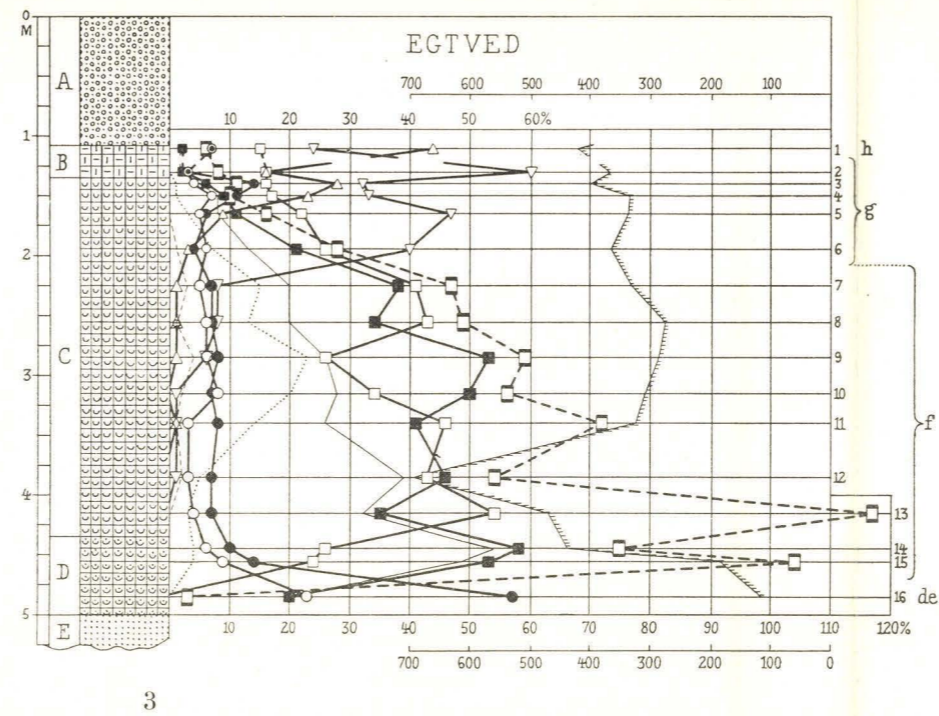
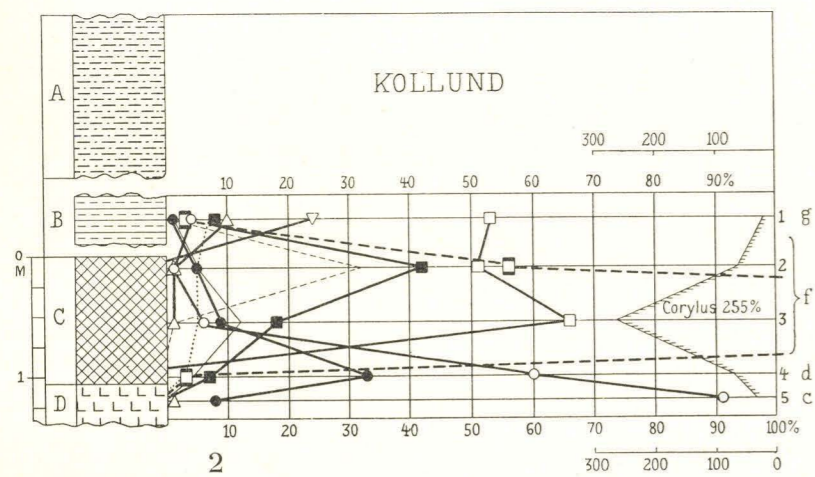
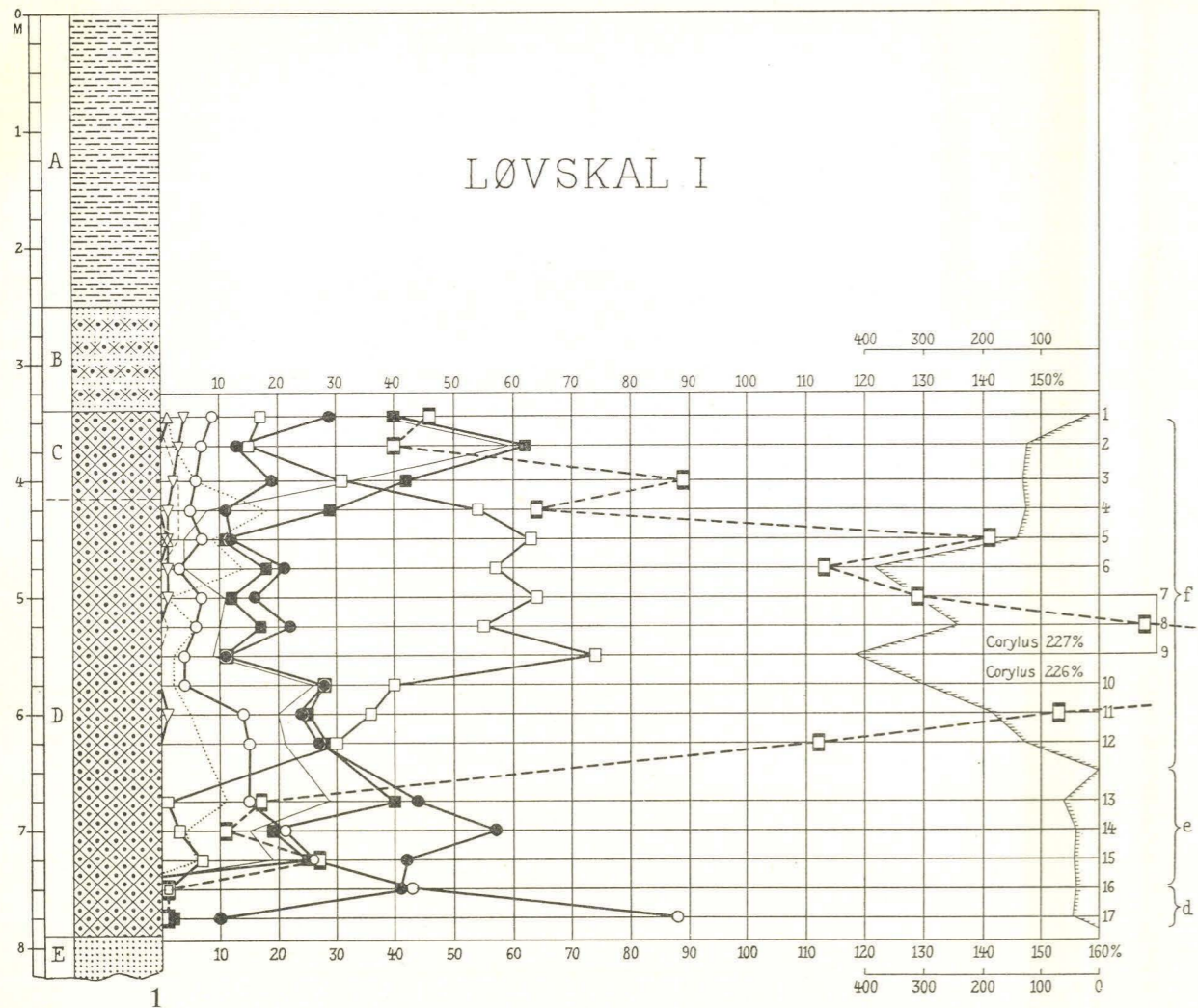
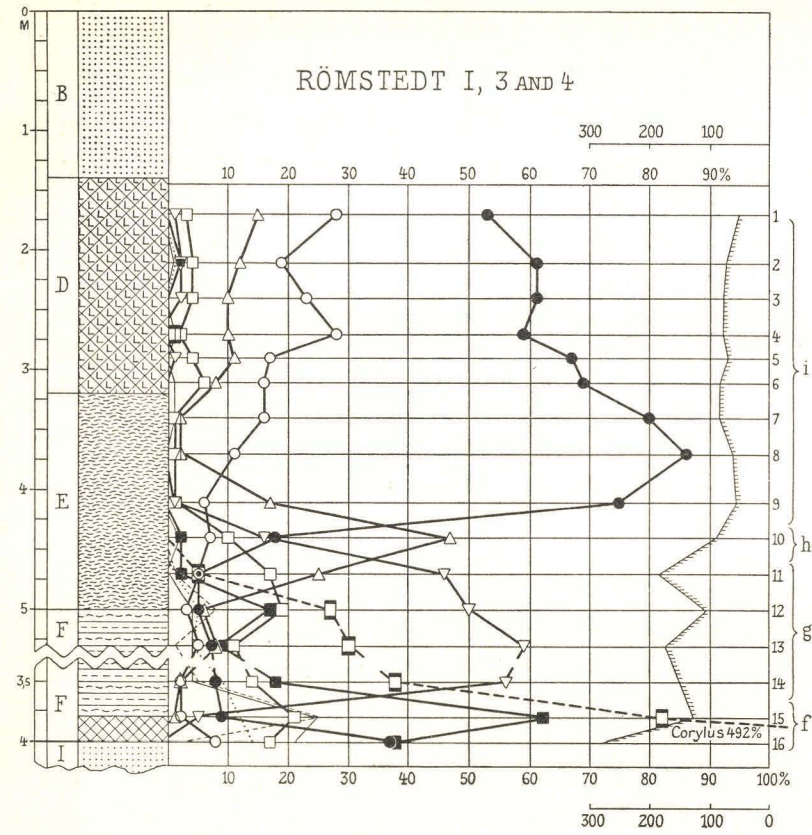


Plate XXXX.

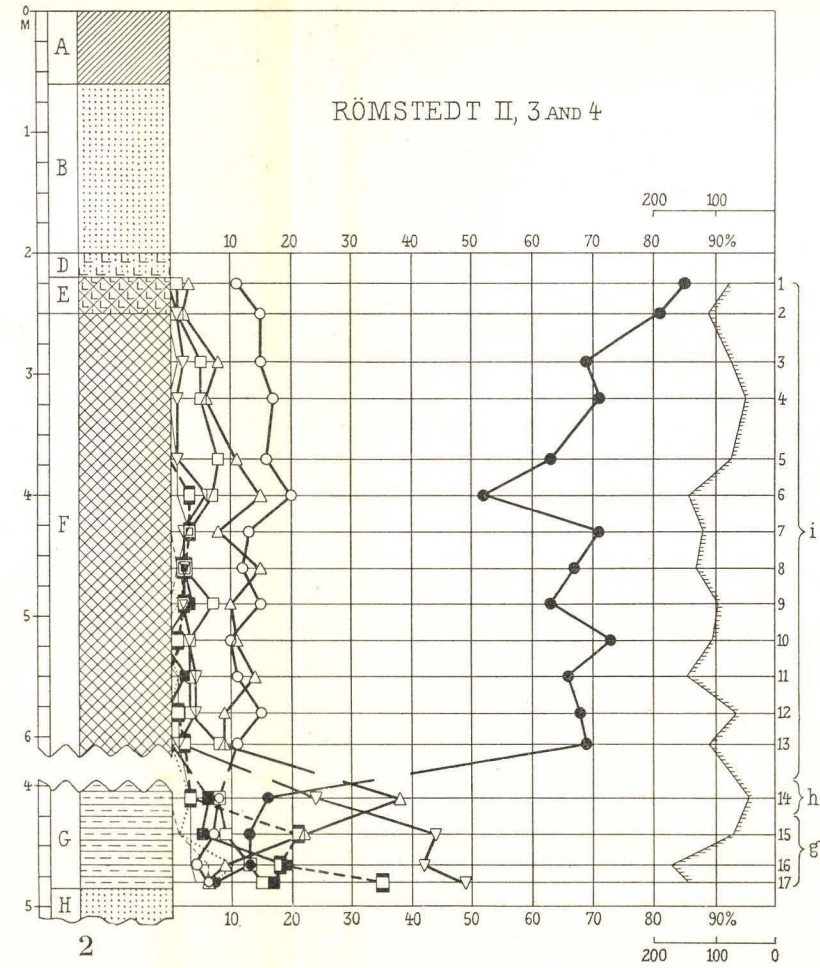
## Plate XXXX.

### Pollen Diagrams from interglacial deposits in Northwest Germany.

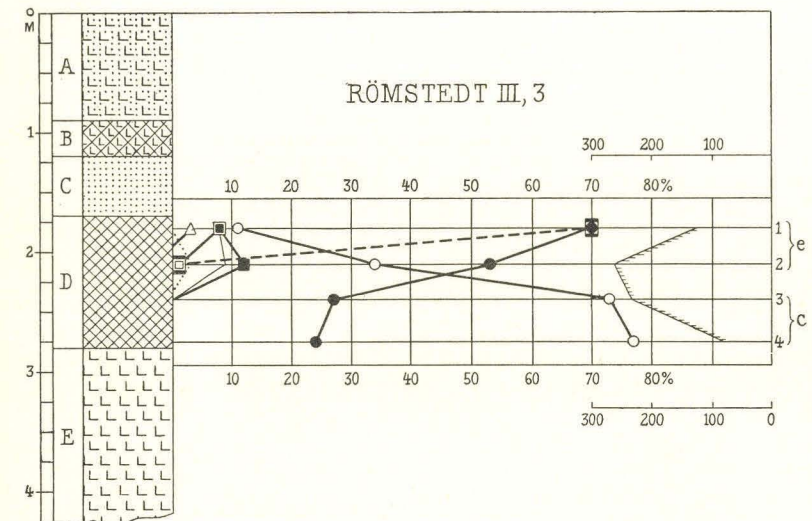
- Fig. 1. Römstedt I. Borings 3 (Spectra 1—13) and 4 (Spectra 14 and 15). See Text, p. 285 and Pl. XXVII.
- Fig. 2. Römstedt II. Borings 3 (Spectra 1—13) and 4 (Spectra 14—17). See Text, p. 288 and Pl. XXVII.
- Fig. 3. Römstedt III. Borings 3. See Text, p. 291.
- Fig. 4. — III. — 2. — p. 290.
- Fig. 5. Kuhgrund II. See Text, p. 280.
- Fig. 6. Fleestedt. See Text, p. 294.
- Fig. 7. Ober Ohe. See Text, p. 299.
- Fig. 8. Loopstedt. See Text, p. 302.



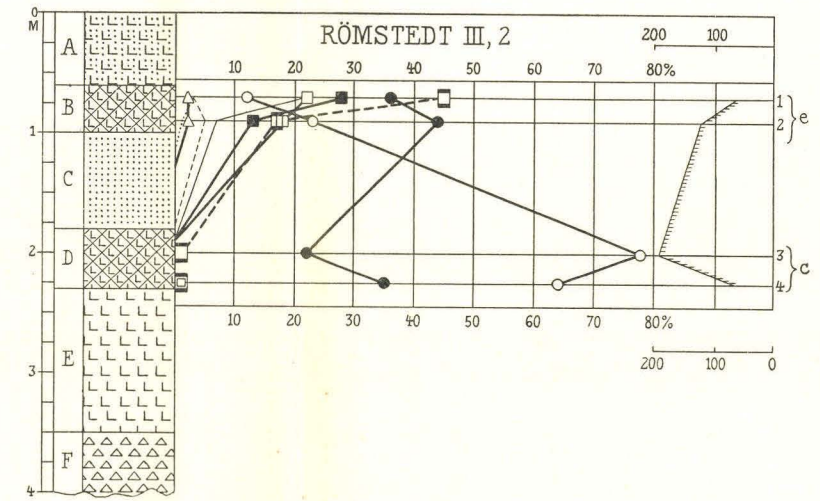
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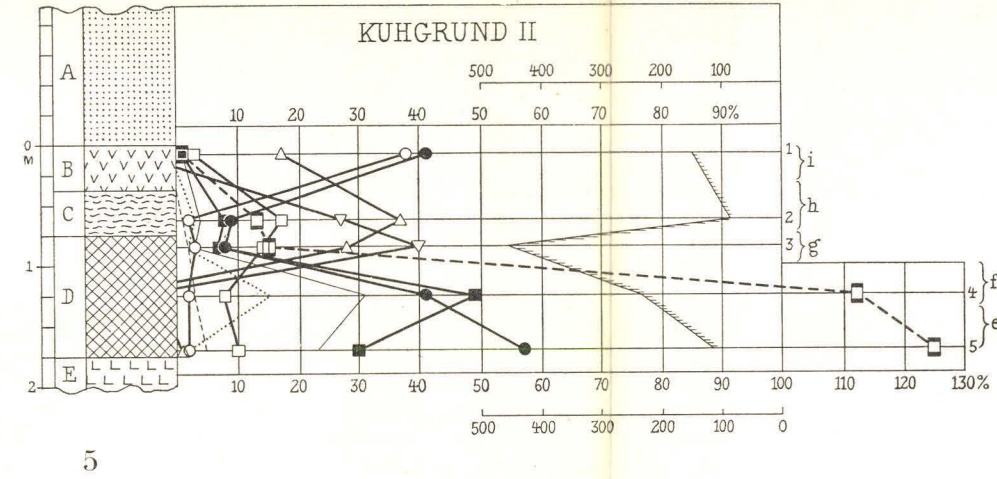
2



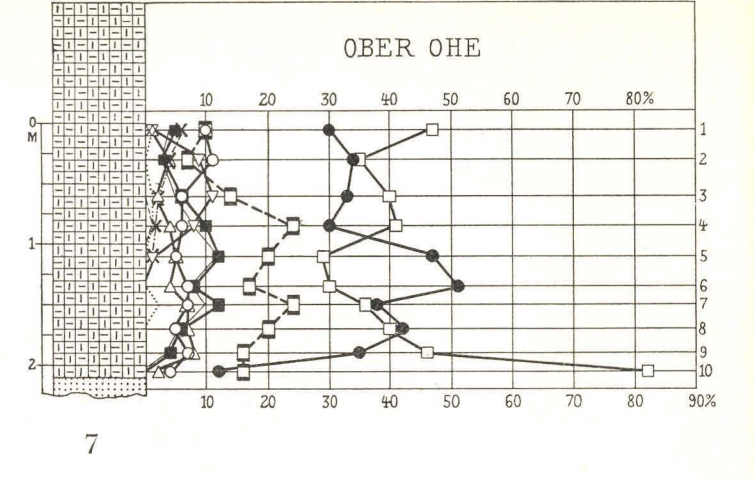
3



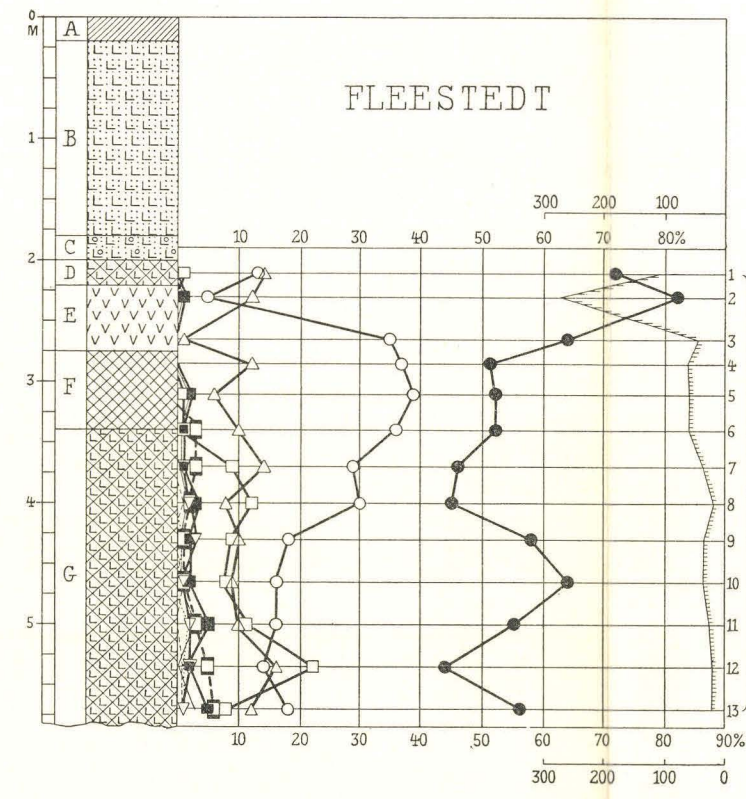
4



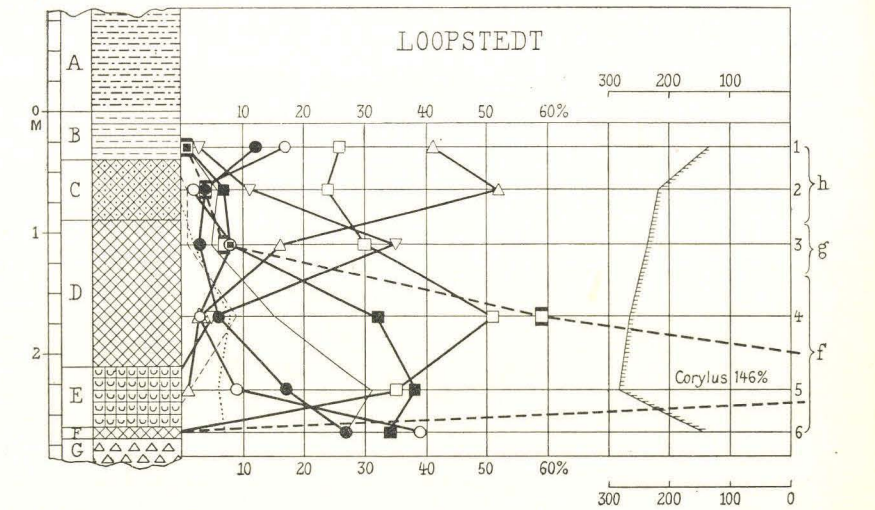
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