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The development of the Bunter Sandstone region of Nottinghamshire

Bell, George Ernest

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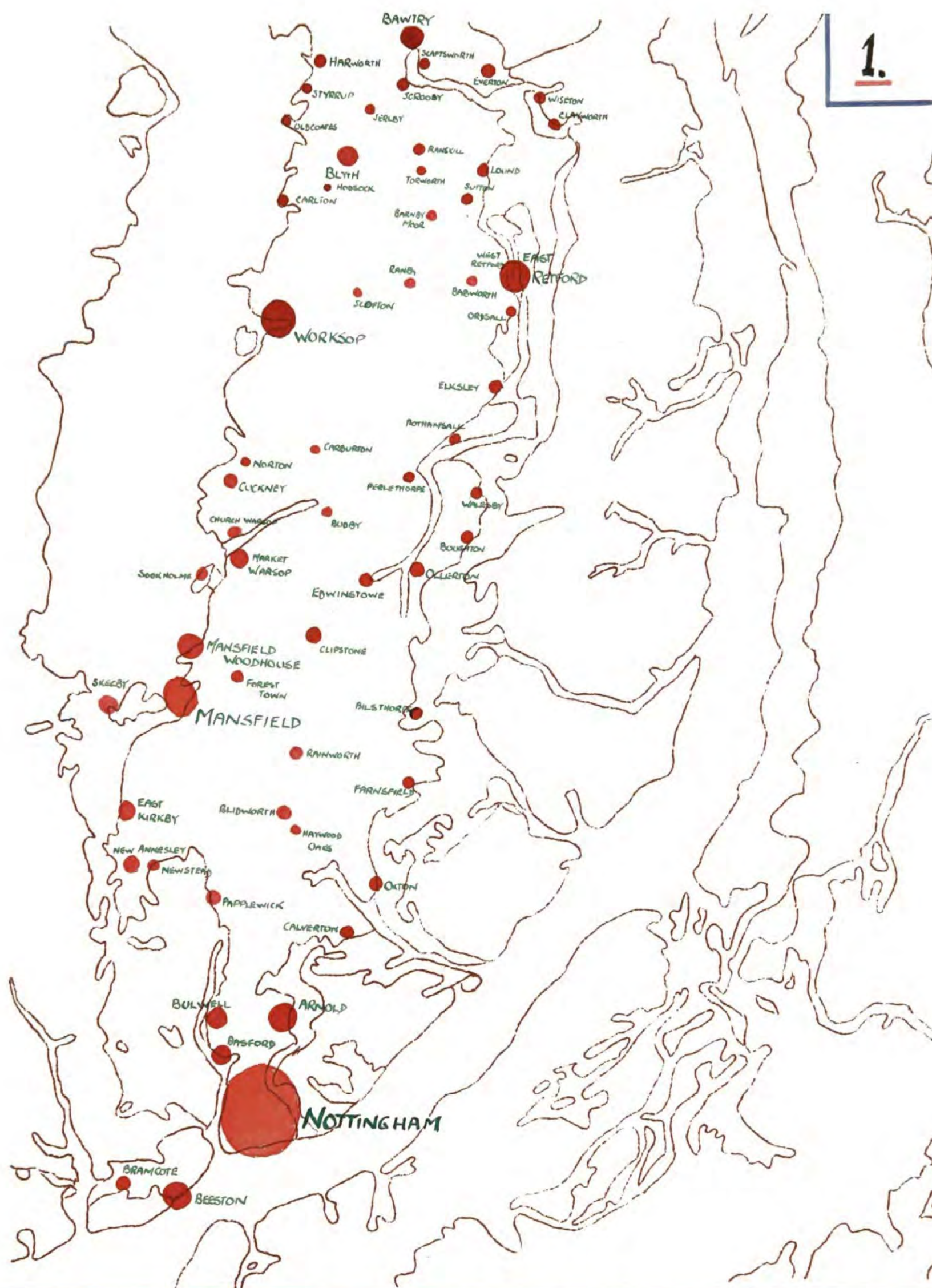
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Maps and Diagrams.

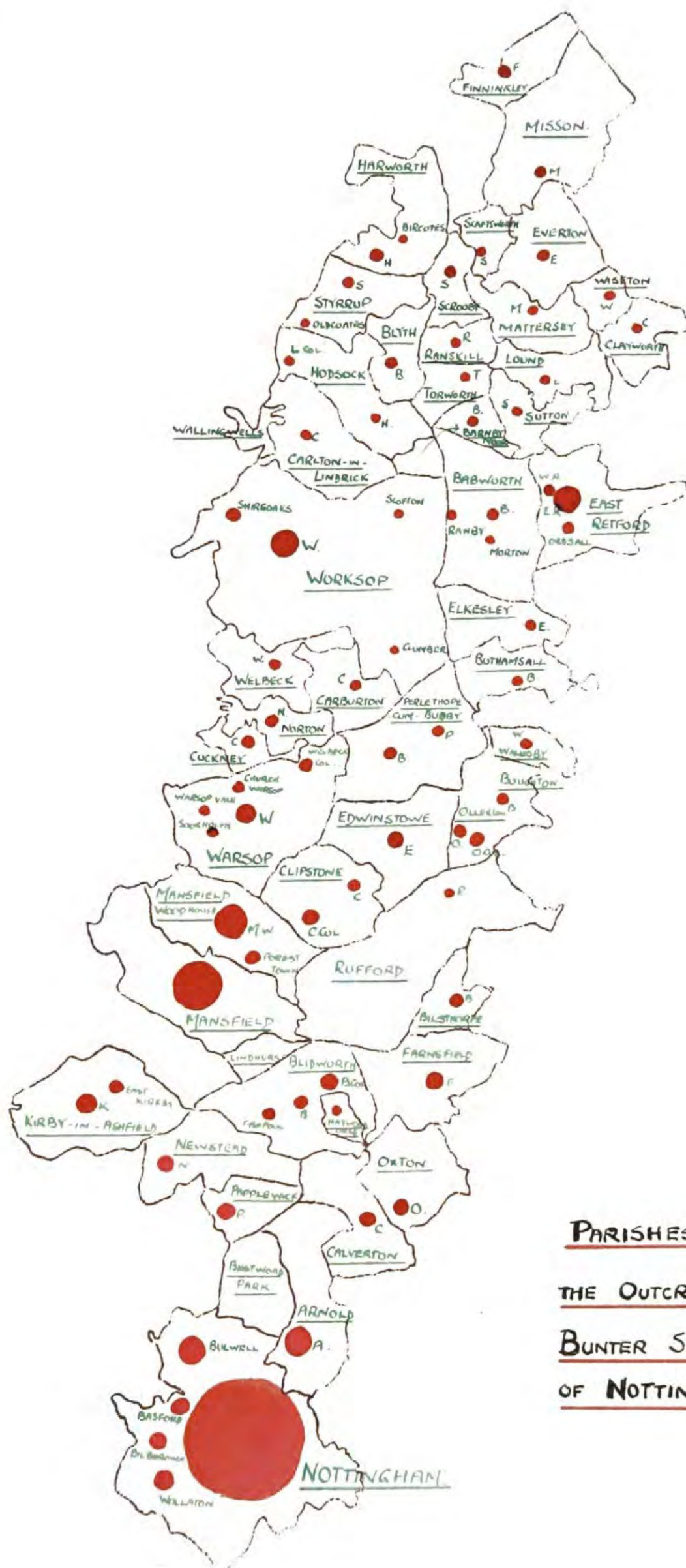
1. Reference map. Towns and villages on the Bunter outcrop.
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3. Geological map. (Scale $\frac{1}{4}$ " to 1 mile).
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48. The Bunter outcrop as a source of water.
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54. Framework centres on the Bunter outcrop in 1845.
55. Modern industrial setting of the Bunter outcrop.
56. Agricultural distributions for 1875 and 1937. Land in use, barley, sheep, dairy cows.



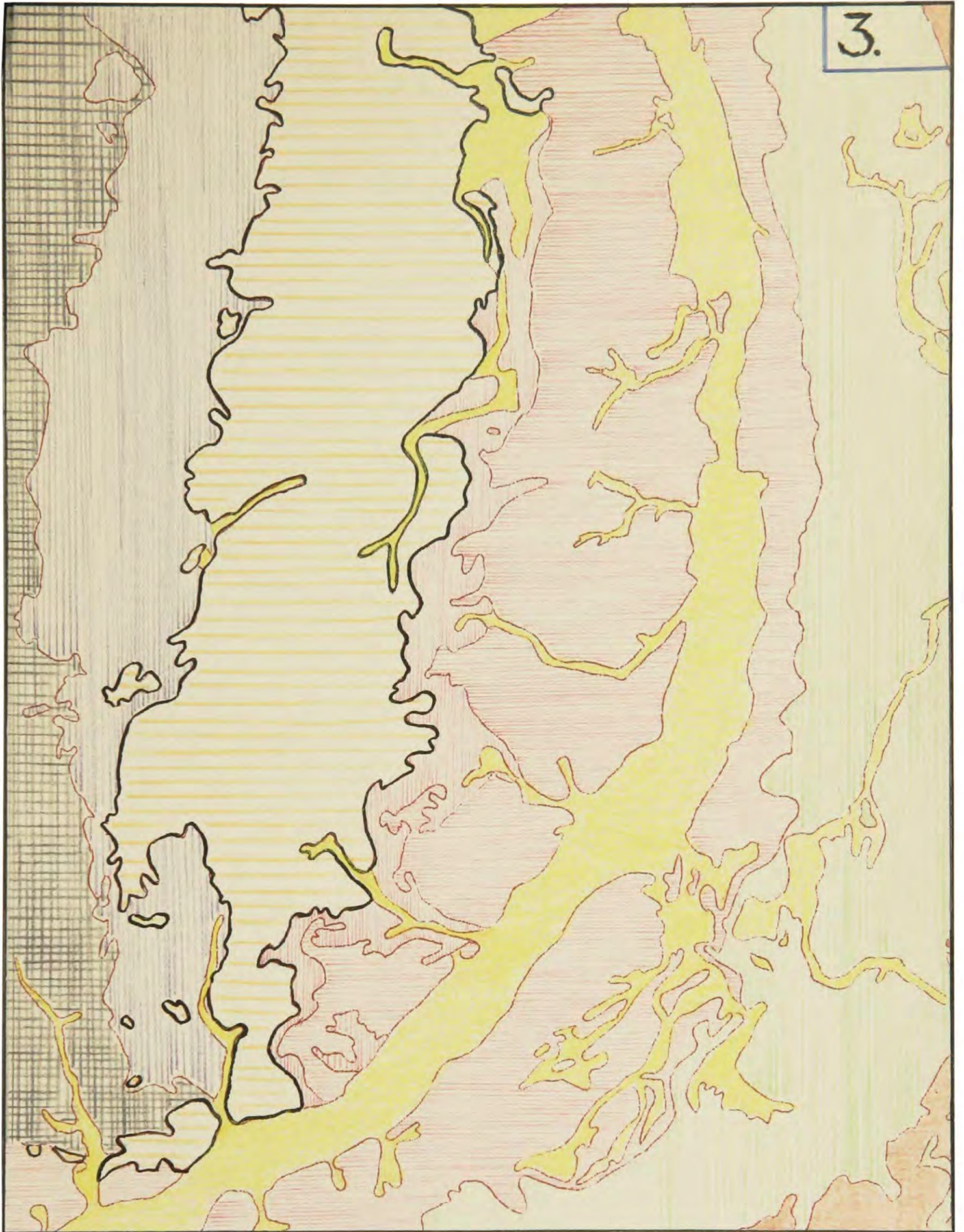
Towns and Villages on the Bunter Outcrop
of Nottinghamshire.

2.



PARISHES ON
THE OUTCROP OF THE
BUNTER SANDSTONE
OF NOTTINGHAMSHIRE.

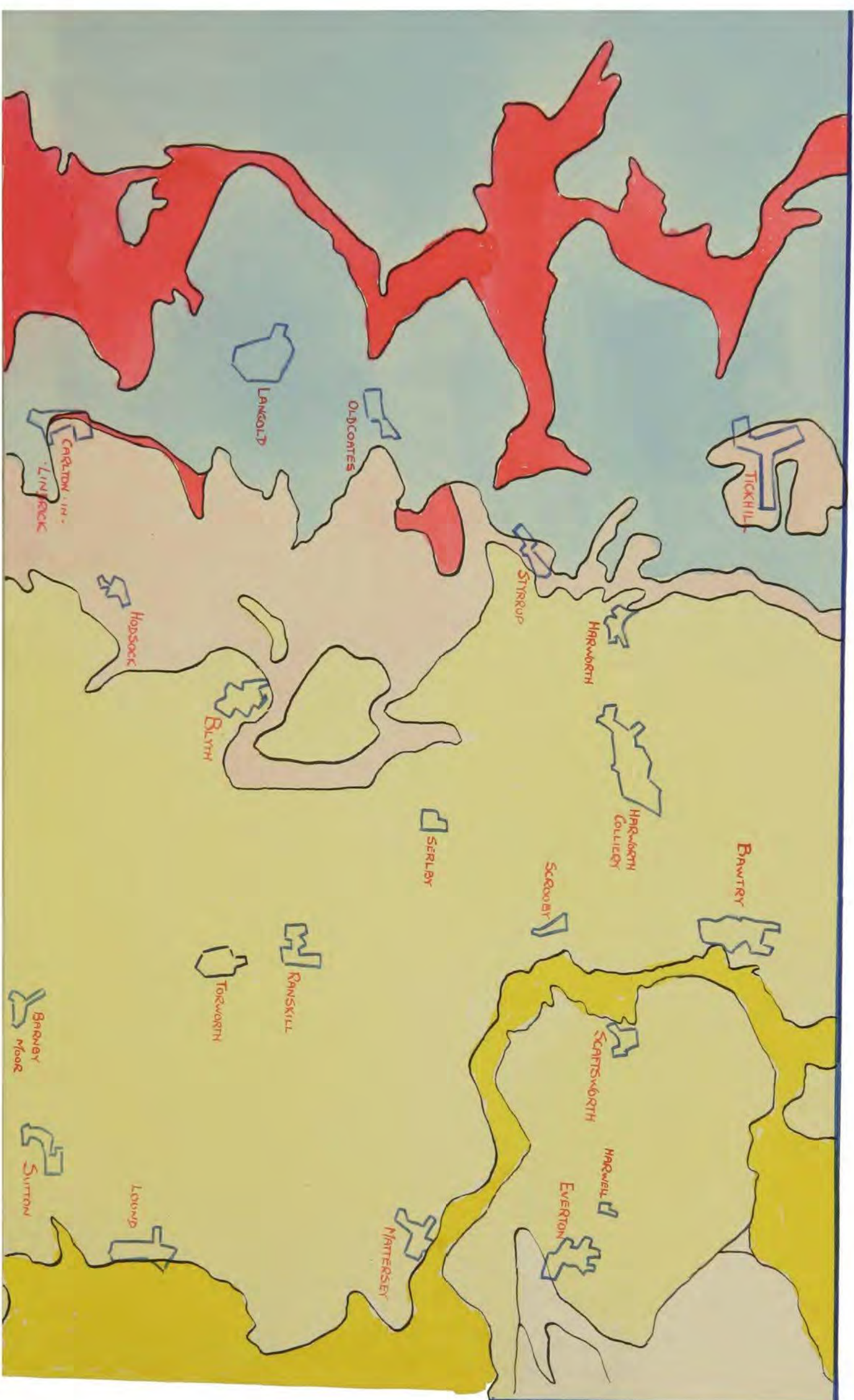
3.

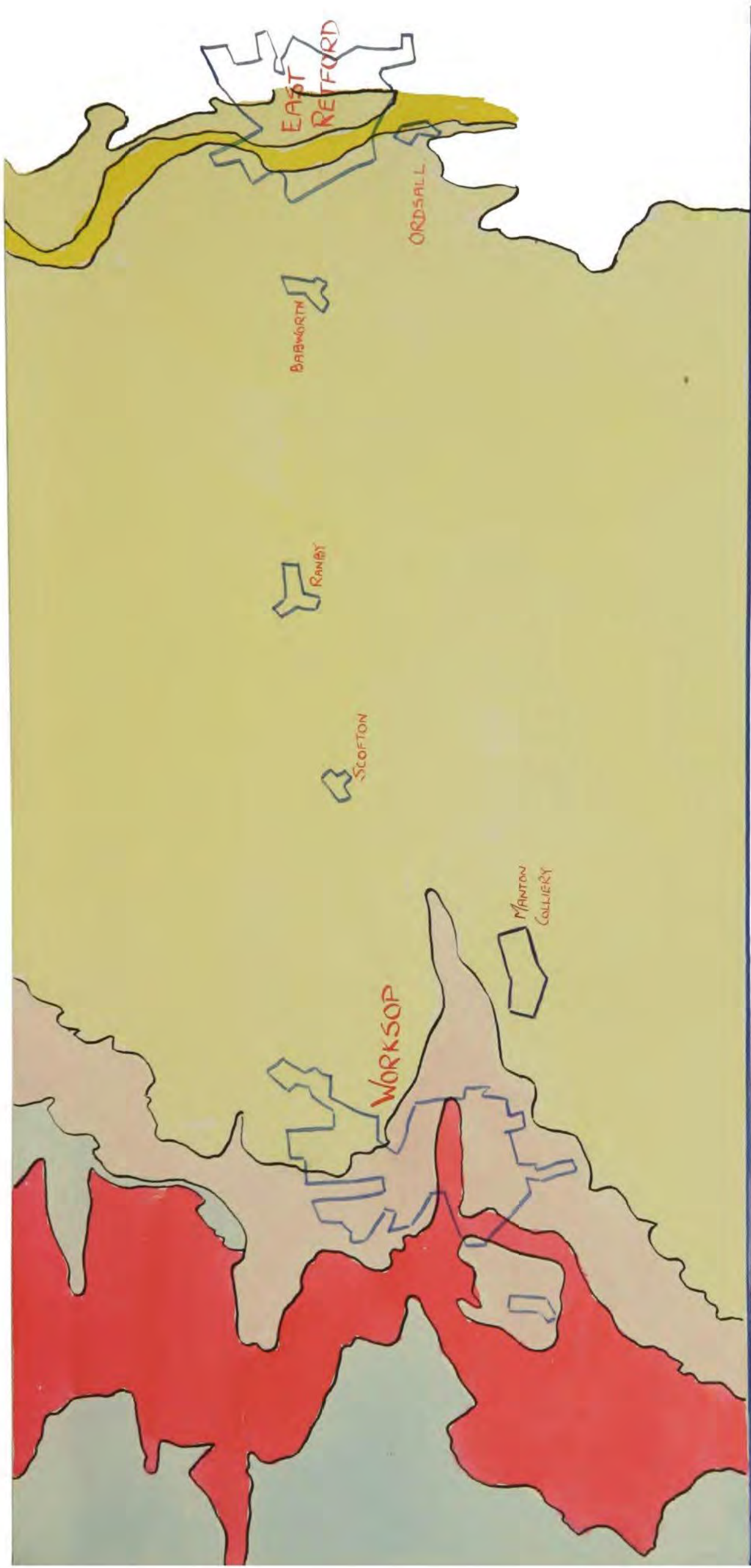


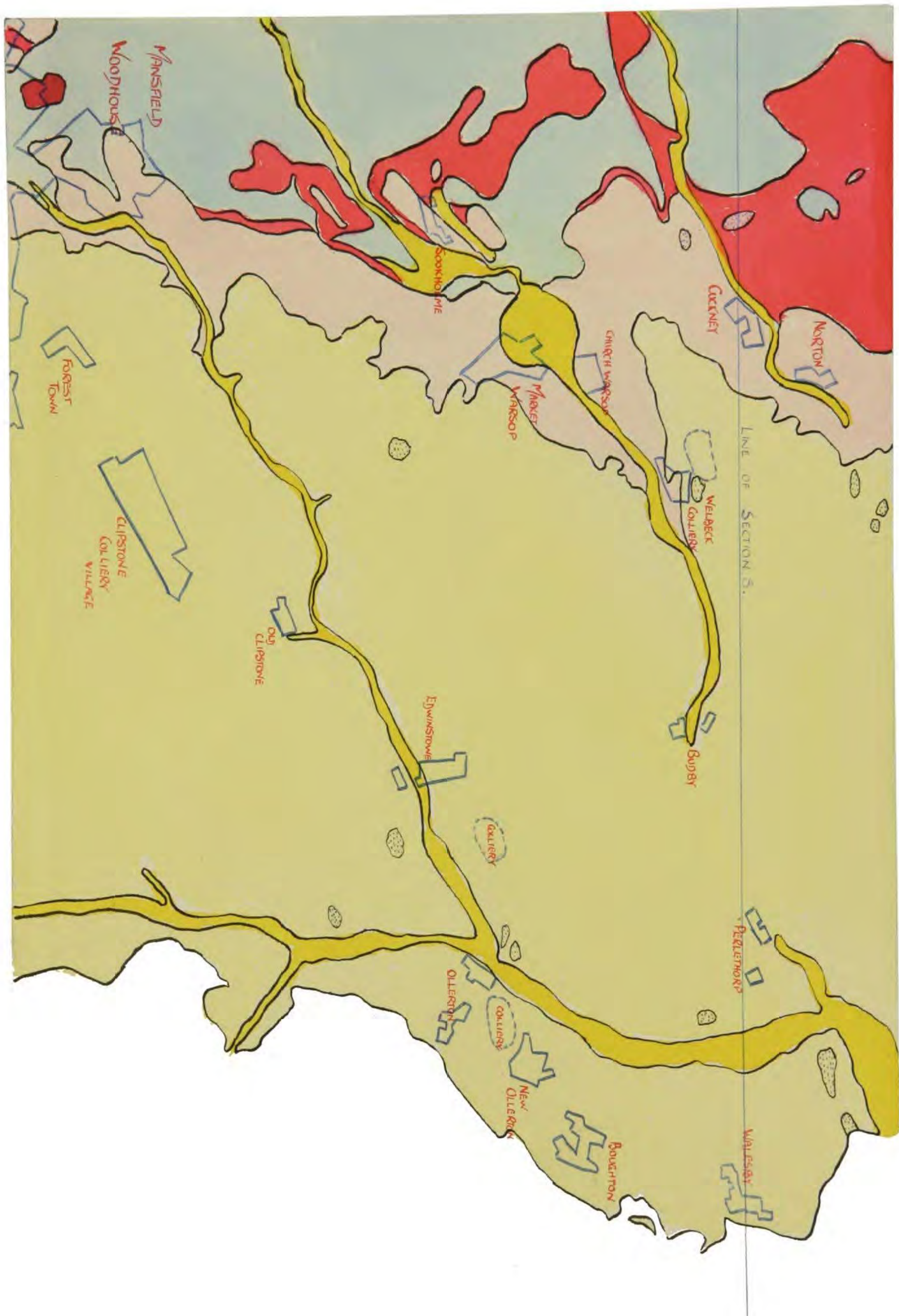
GEOLOGICAL MAP.

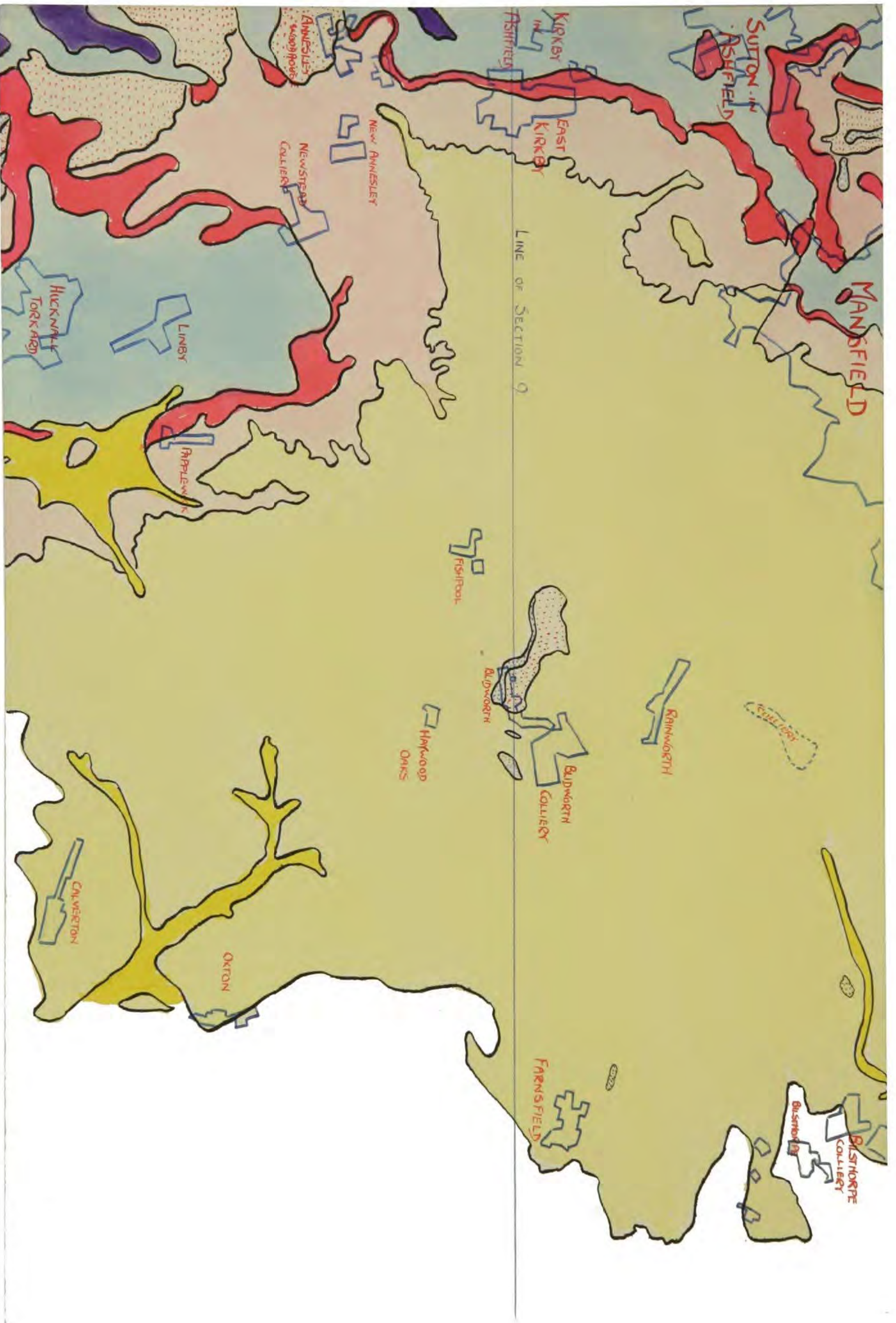
SCALE $\frac{1}{4}$ " = 1 MILE.

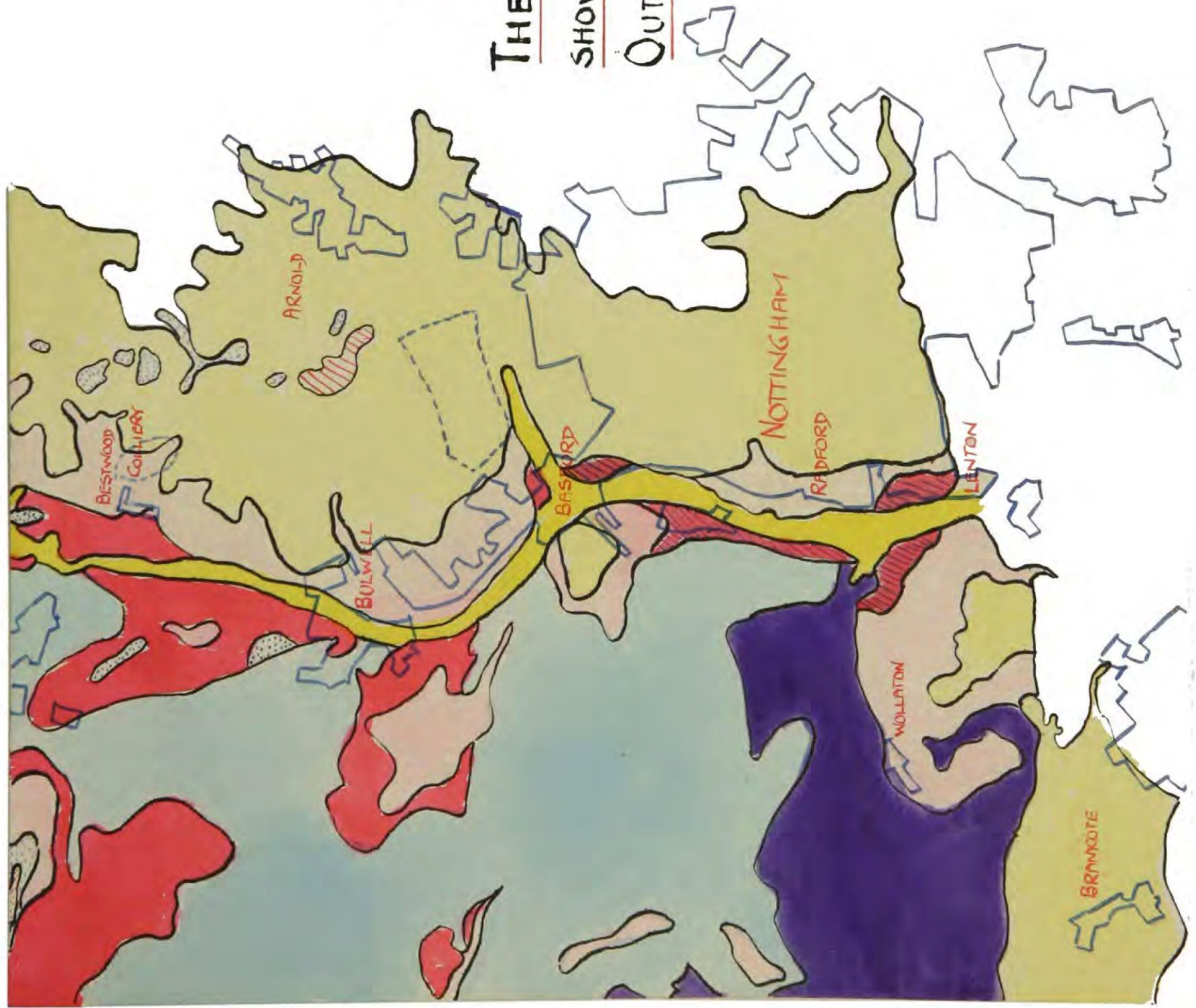








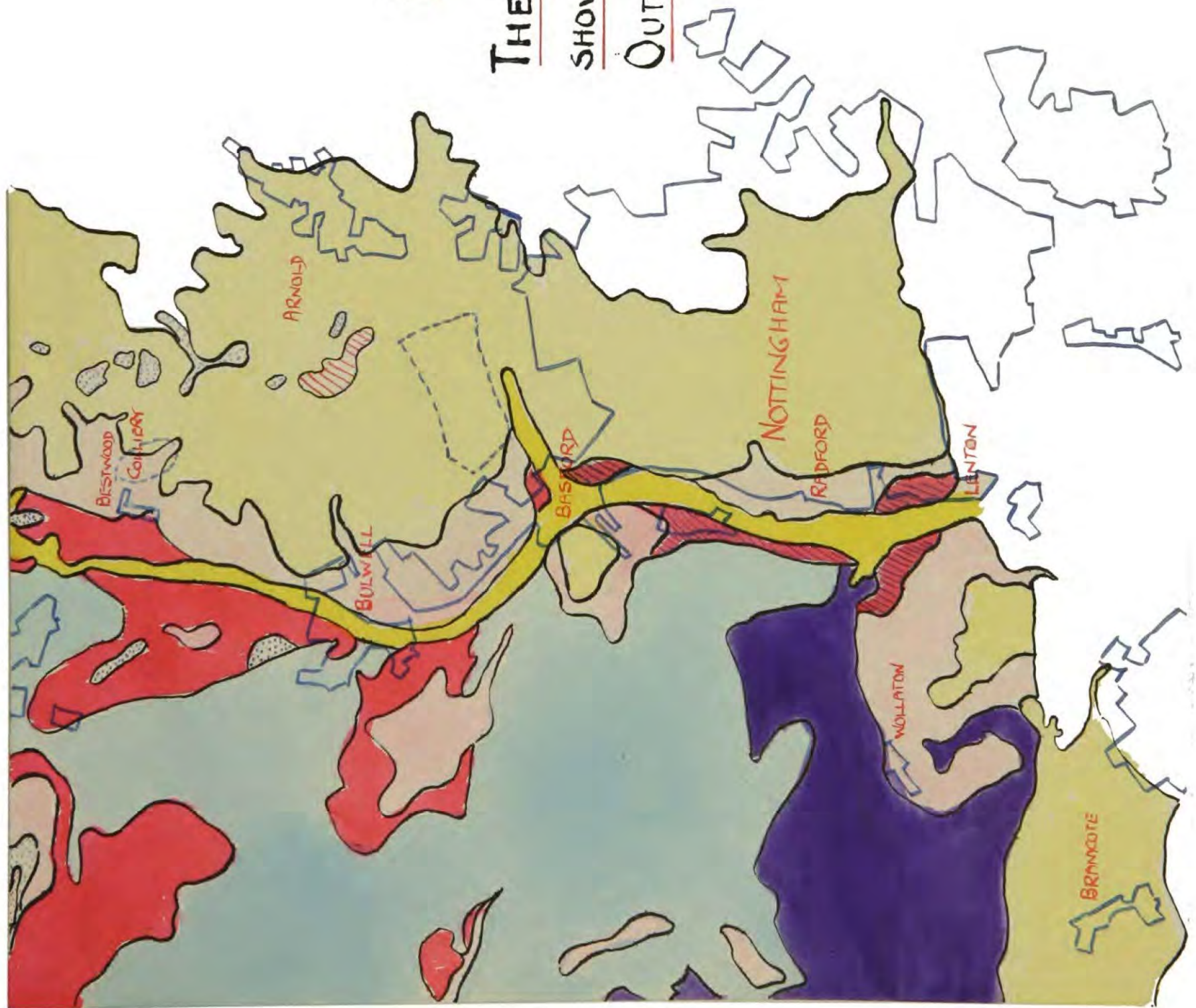




GEOLOGICAL MAP

THE BUNTER SANDSTONE OF NOTTS.,
SHOWING SETTLEMENTS ON THE
OUTCROP. (SCALE 1" = 1 MILE.)

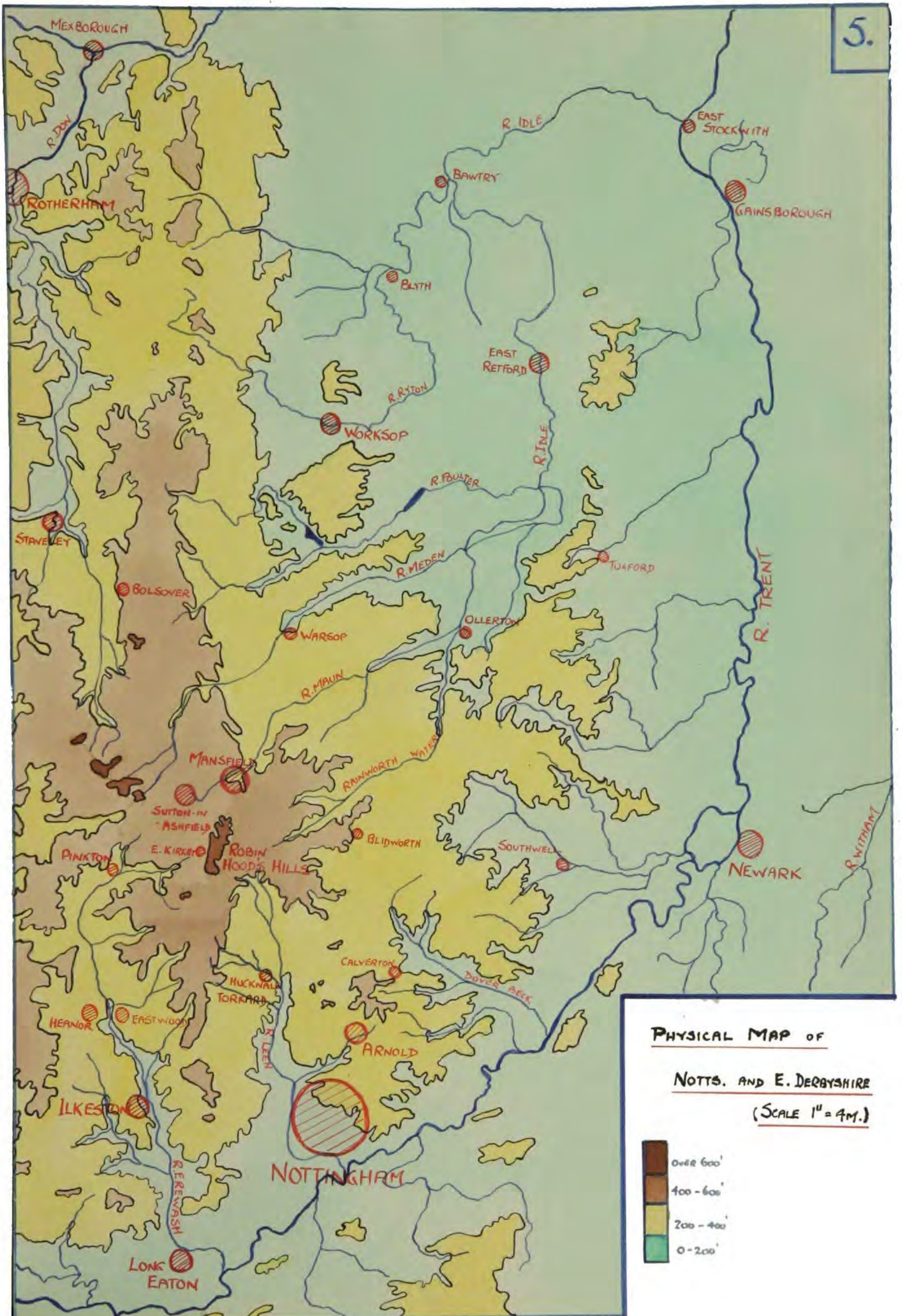
ALLUVIUM	RIVER GRAVEL	GLACIAL GRAVEL AND SAND.	BOULDER CLAY	KEUPER WATERSTONES	BUNTER PEBBLE BEDS	LOWER MOTTLED SANDSTONE	PERMIAN MARL	PERMIAN LIMESTONE	COAL MEASURES
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GEOLOGICAL MAP

THE BUNTER SANDSTONE OF NOTTS.,
SHOWING SETTLEMENTS ON THE
OUTCROP. (SCALE 1" = 1 MILE.)



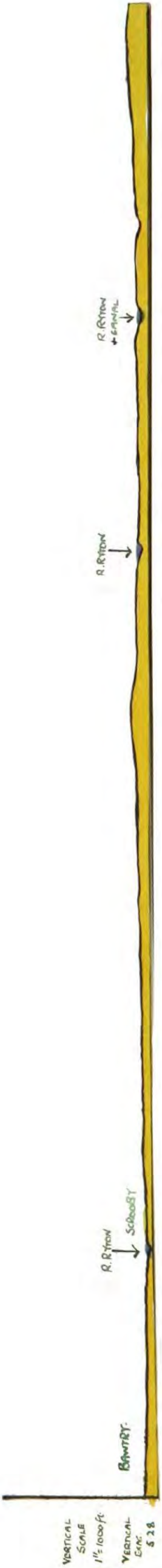




SPOT HEIGHTS ON THE BUNTER AND NEIGHBOURING OUTCROPS.

BAWTRY TO NOTTINGHAM.

7.



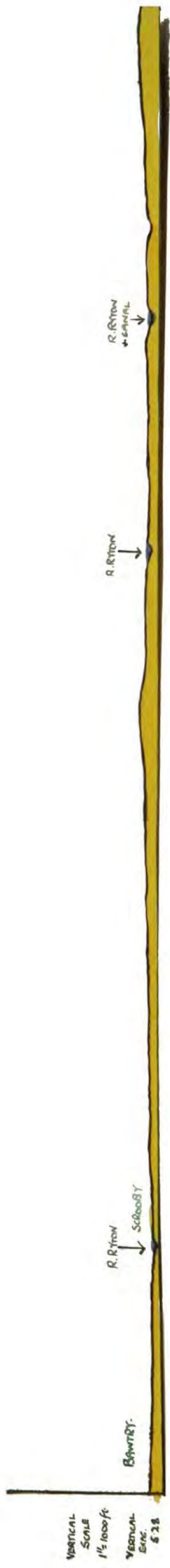




WEST. NORTHMAN

BAWTRY TO NOTTINGHAM.

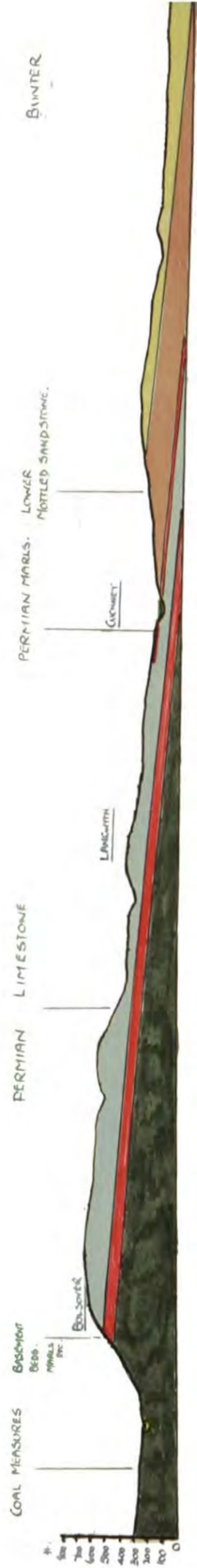
7.

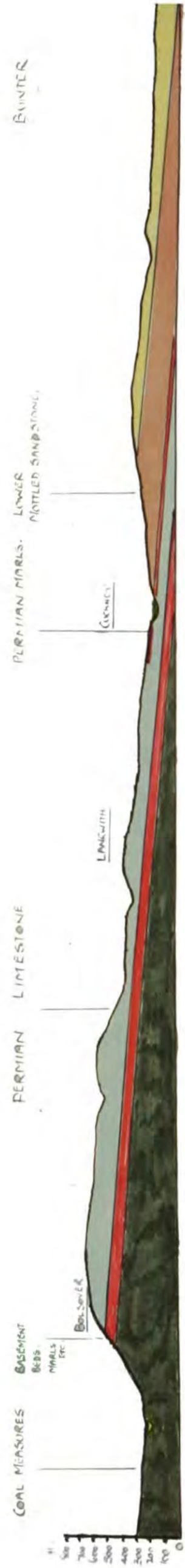




BOLSOVER - CUCKNEY - WALESBY - TUXFORD SECTION.

Q.





PEBBLE BEDS

THORNTON
LAKE

R. MAIN

WALSLEY

NEUPER WATERSTONES

NEUPER MARLS

TURKOP

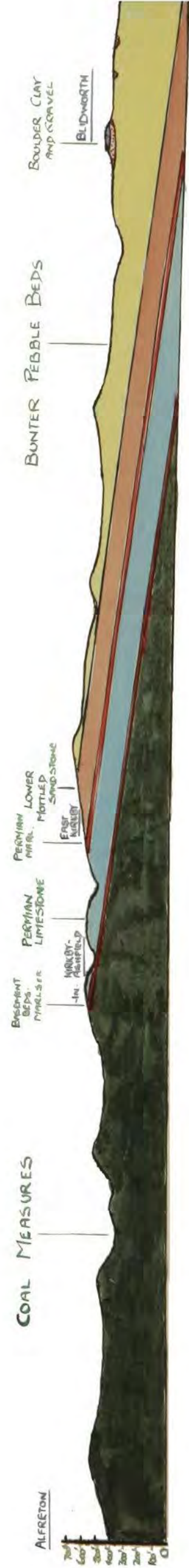
SCALE

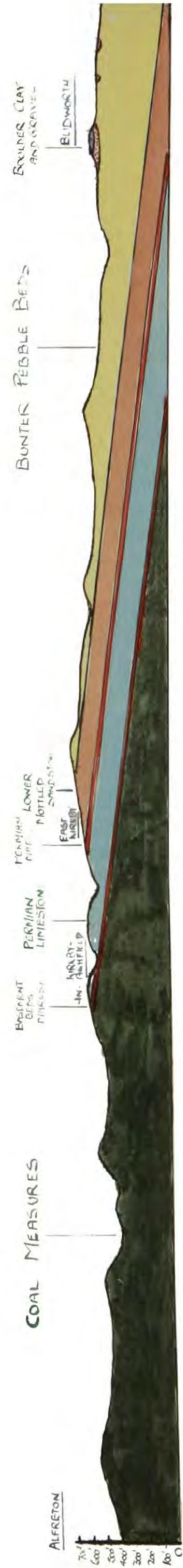
HORIZONTAL 1" = 1 MILE
VERTICAL 1" = 1000 FT.
VERT. EXAG. = 5.25.

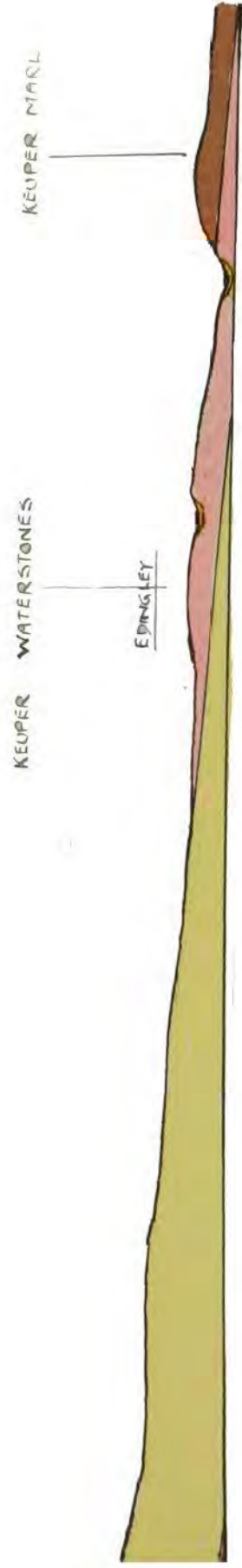


ALFRETON - E. KIRKBY - BLIDWORTH - EDINGLEY SECTION.

9.

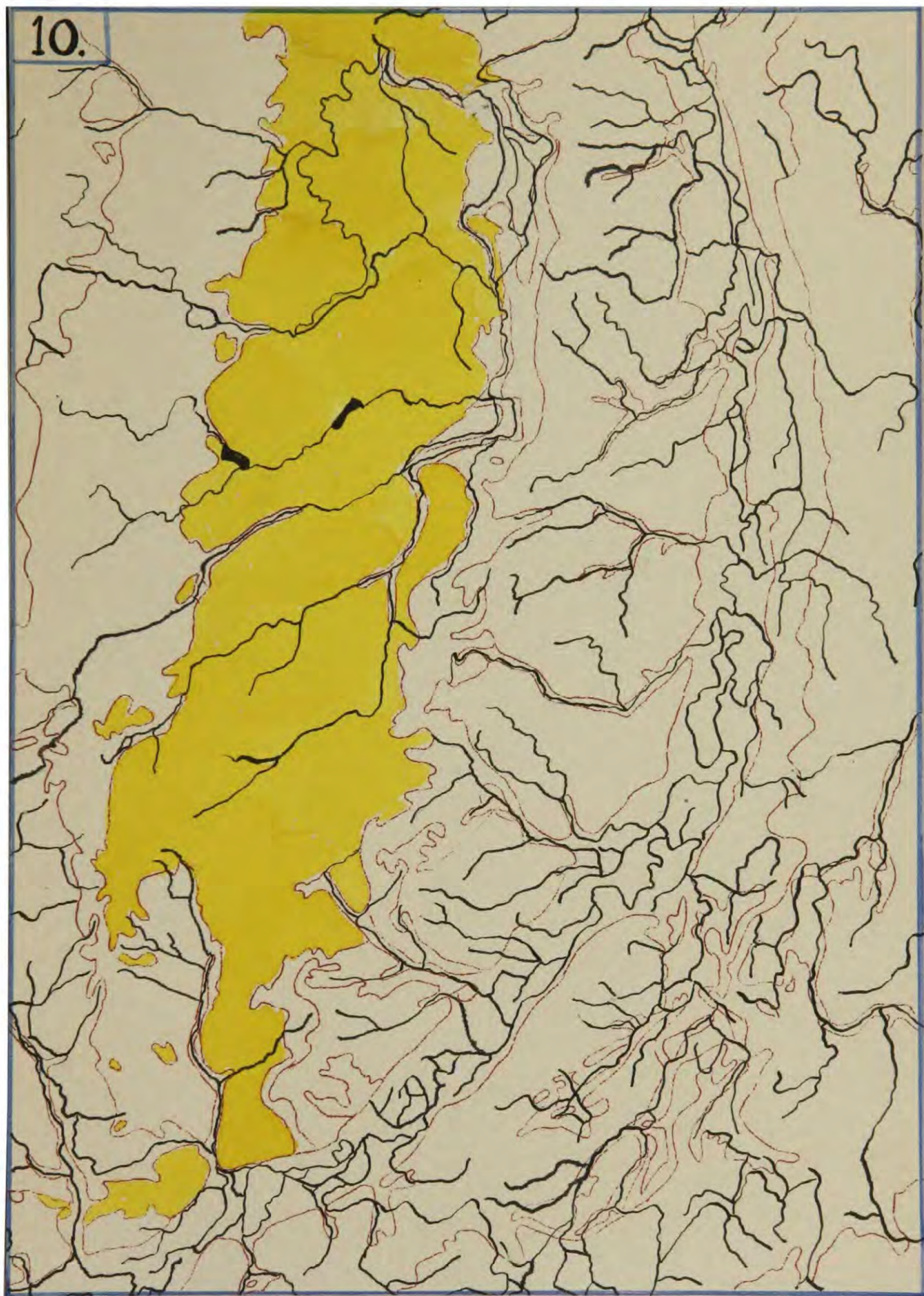






SCALE: HORIZONTAL 1" = 1 MILE
VERTICAL 1" = 1000 ft
VERT. EXAG. = 528

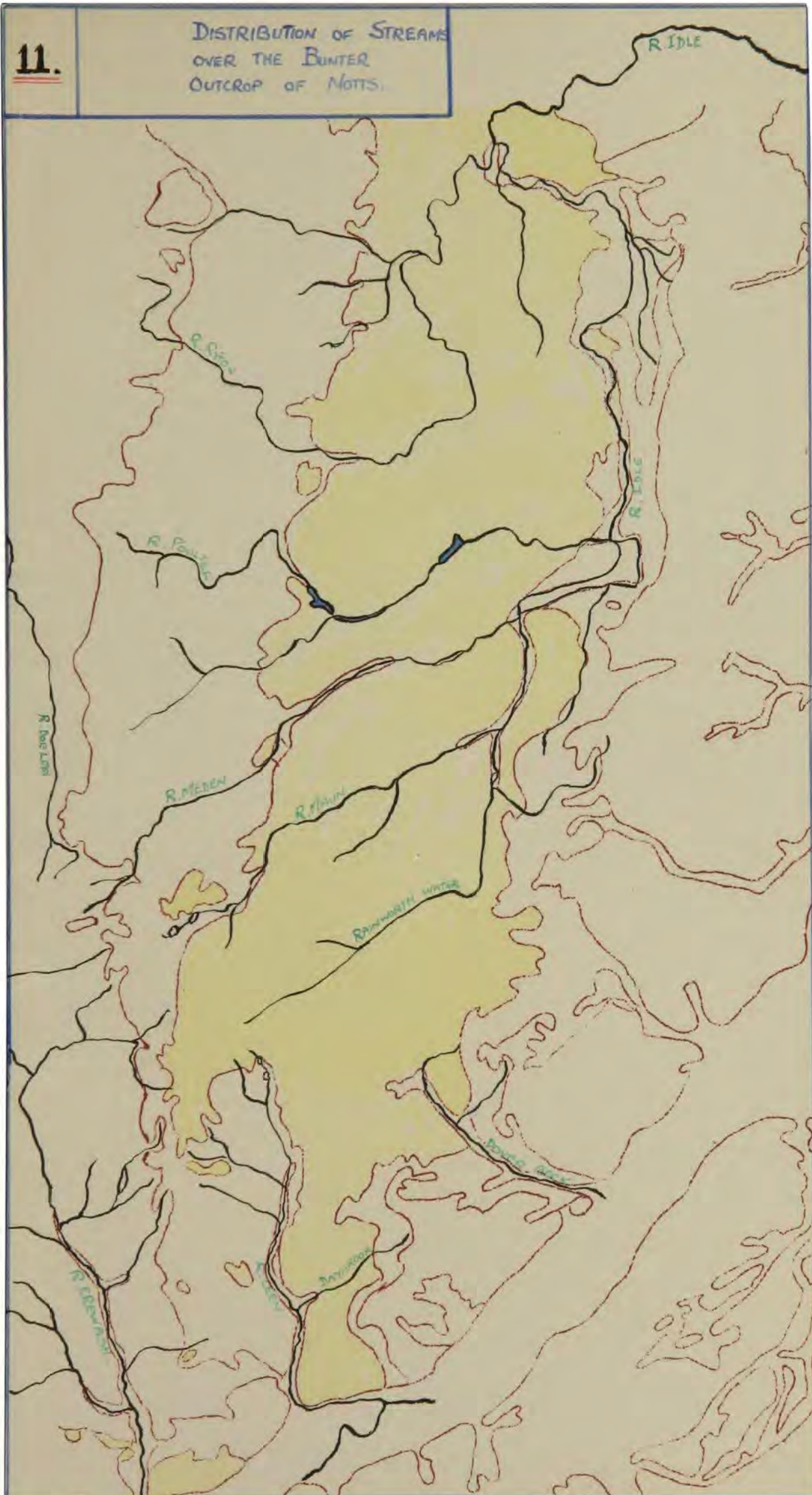
10.

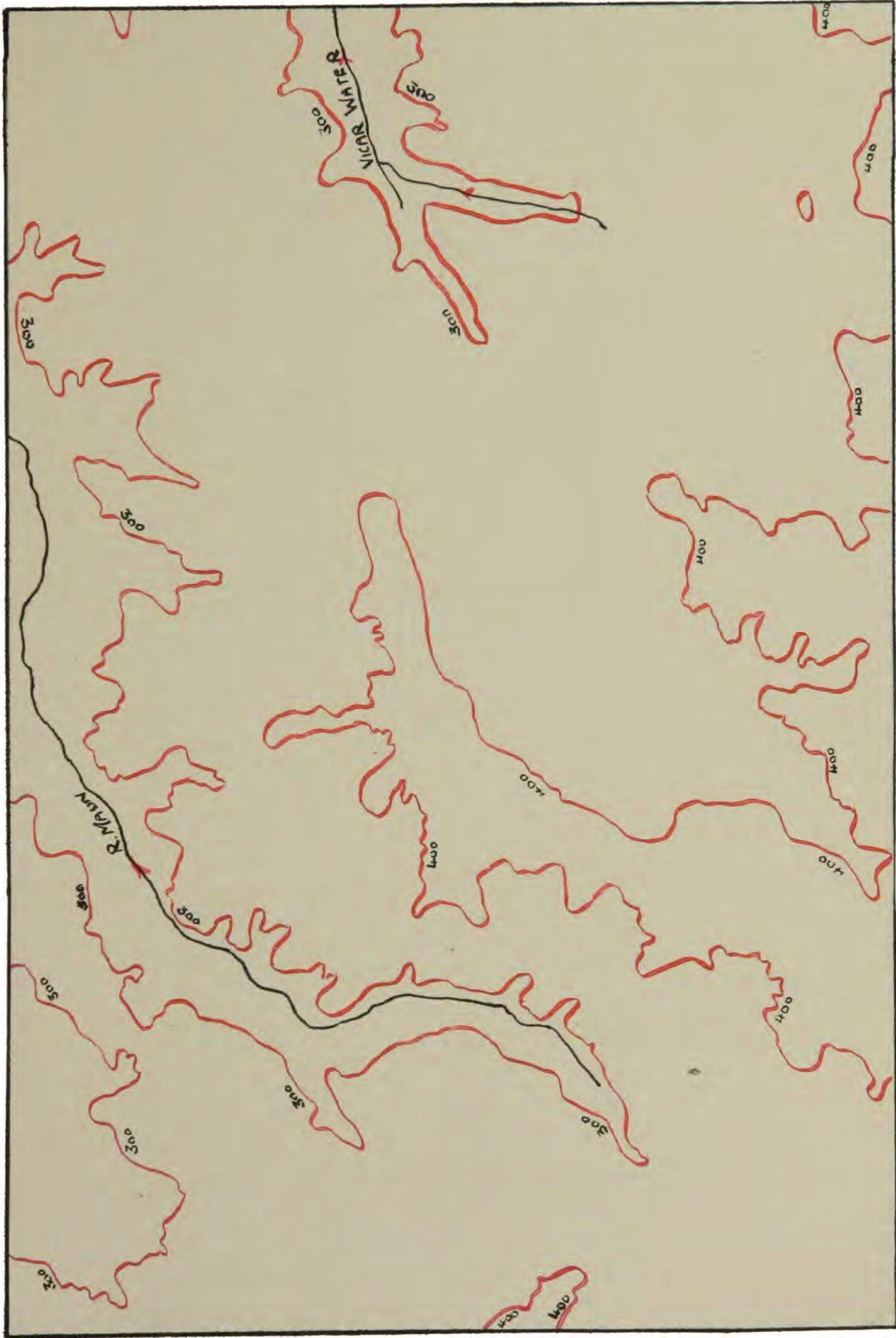


DISTRIBUTION OF STREAMS OVER NOTTINGHAMSHIRE
AND EAST DERBYSHIRE. SCALE $\frac{1}{4}$ " = 1 MILE.

11.

DISTRIBUTION OF STREAMS
OVER THE BUNTER
OUTCROP OF NOTTS.





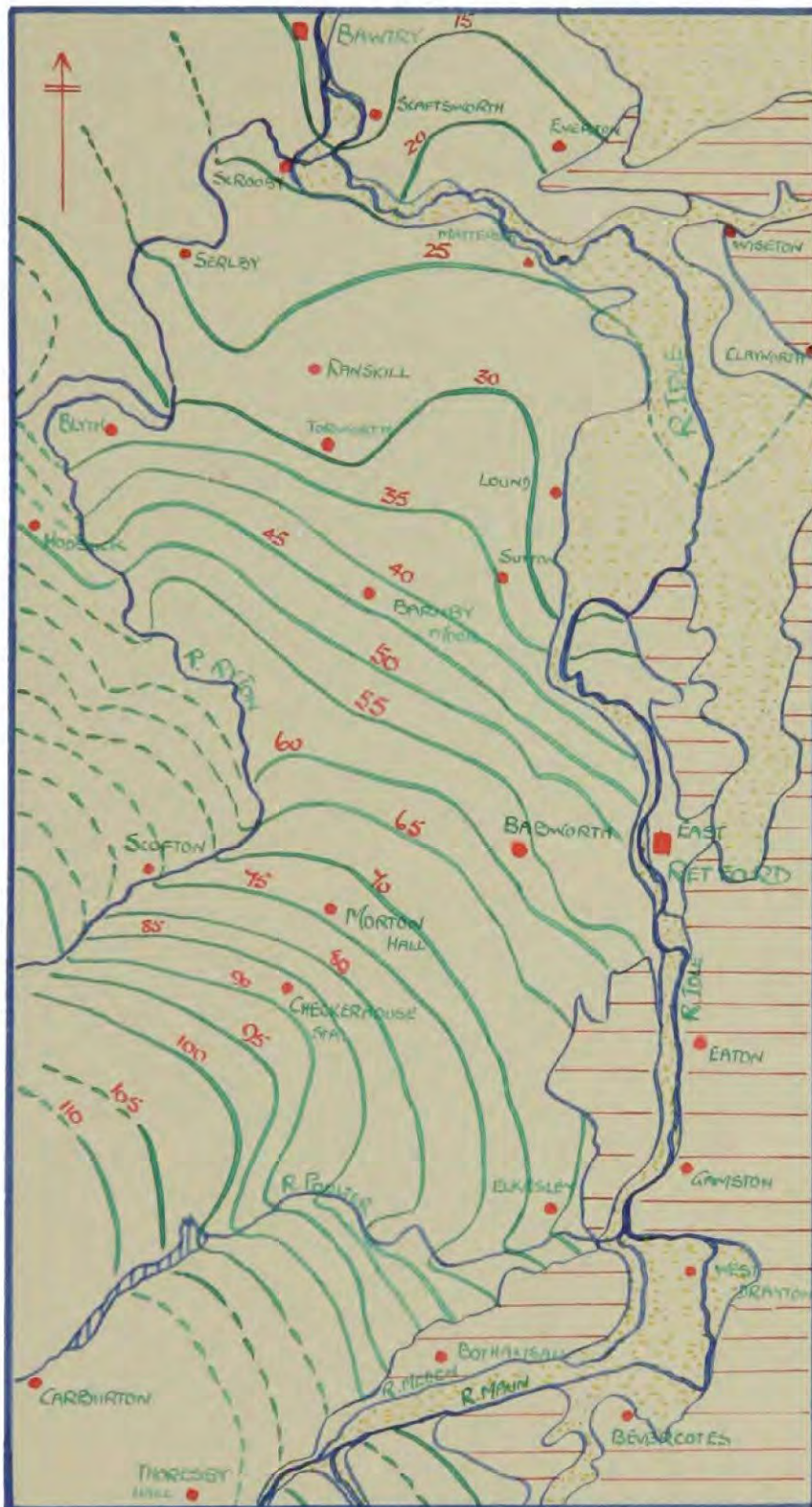
DRY VALLEYS. (SCALE 3" = 1 MILE)



UNDERGROUND WATER OF NOTTINGHAMSHIRE

CONTOURS IN FT. ABOVE OD.

FROM R.C.S. WALTERS. P. 89
"SCIENTIFIC SURVEY OF NOTTINGHAM"



NORTHERN PART OF BUNTER OUTCROP OF
NOTTS, SHOWING UNDERGROUND WATER-
LEVEL, (1909).

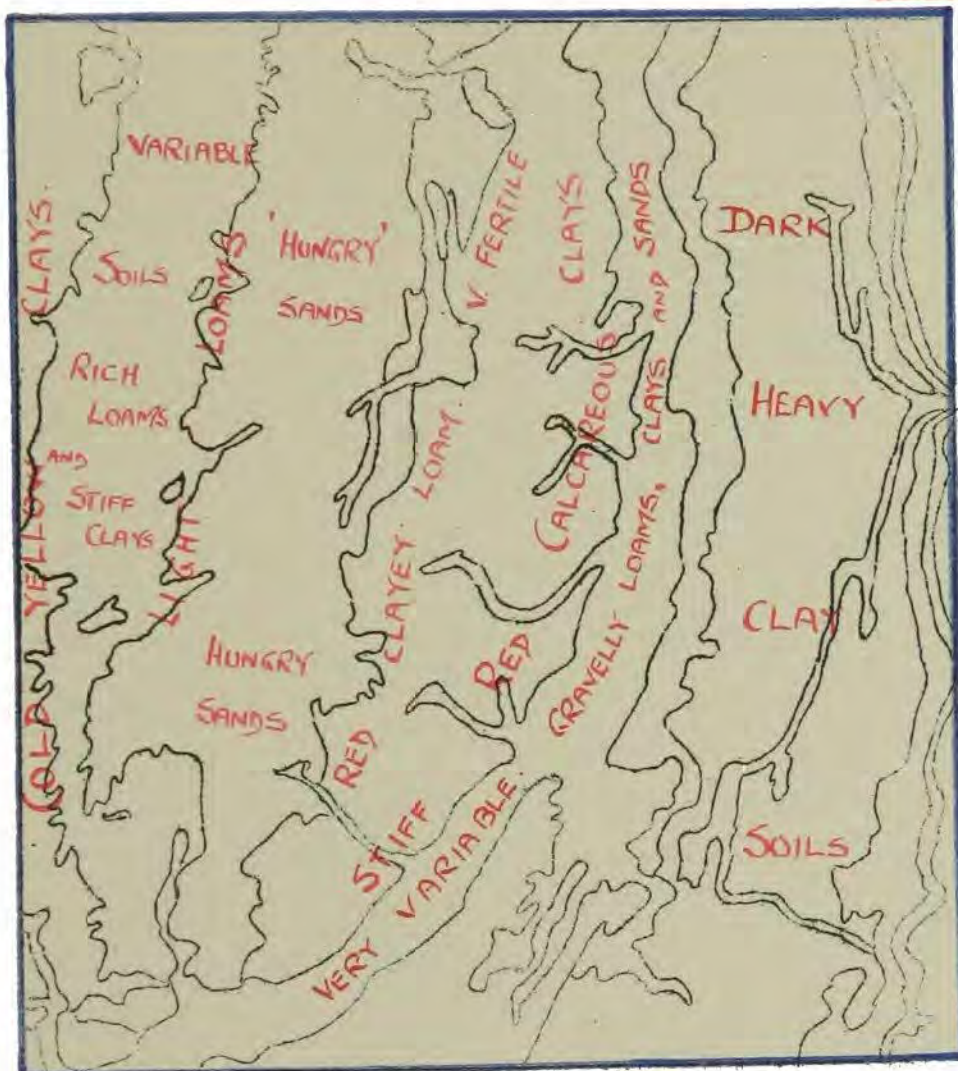
FROM "WATERSUPPLY OF NOTTS" P. 7.
LAMPLUGH AND SMITH

CONTOUR FIGS. IN FT. O.D. (ABOVE SEALEVEL)



[illegible]

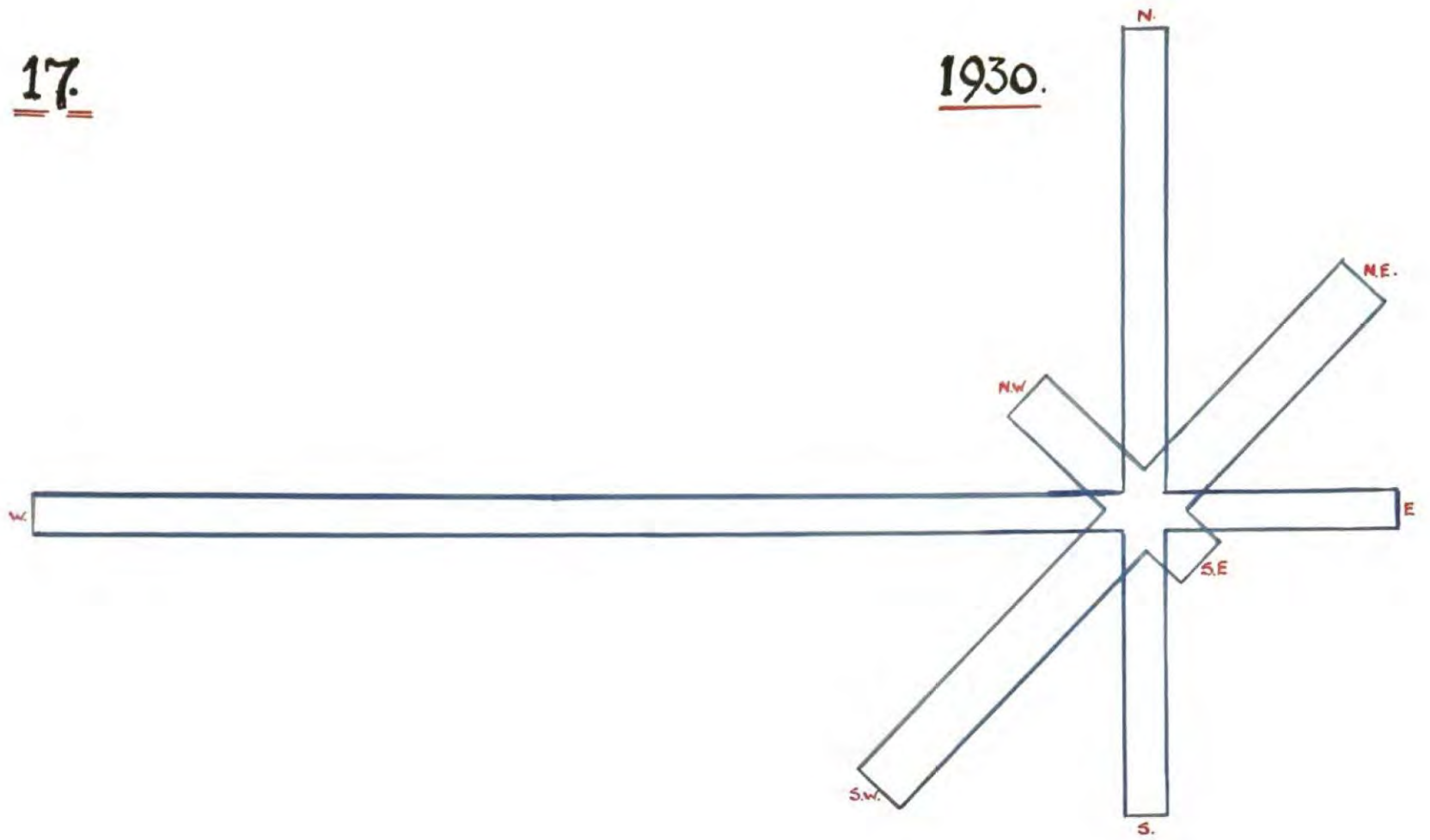
WATER-TABLE CONTOURS AND SPOTHEIGHTS
ON BUNTER OUTCROP. FT. ABOVE O.D.



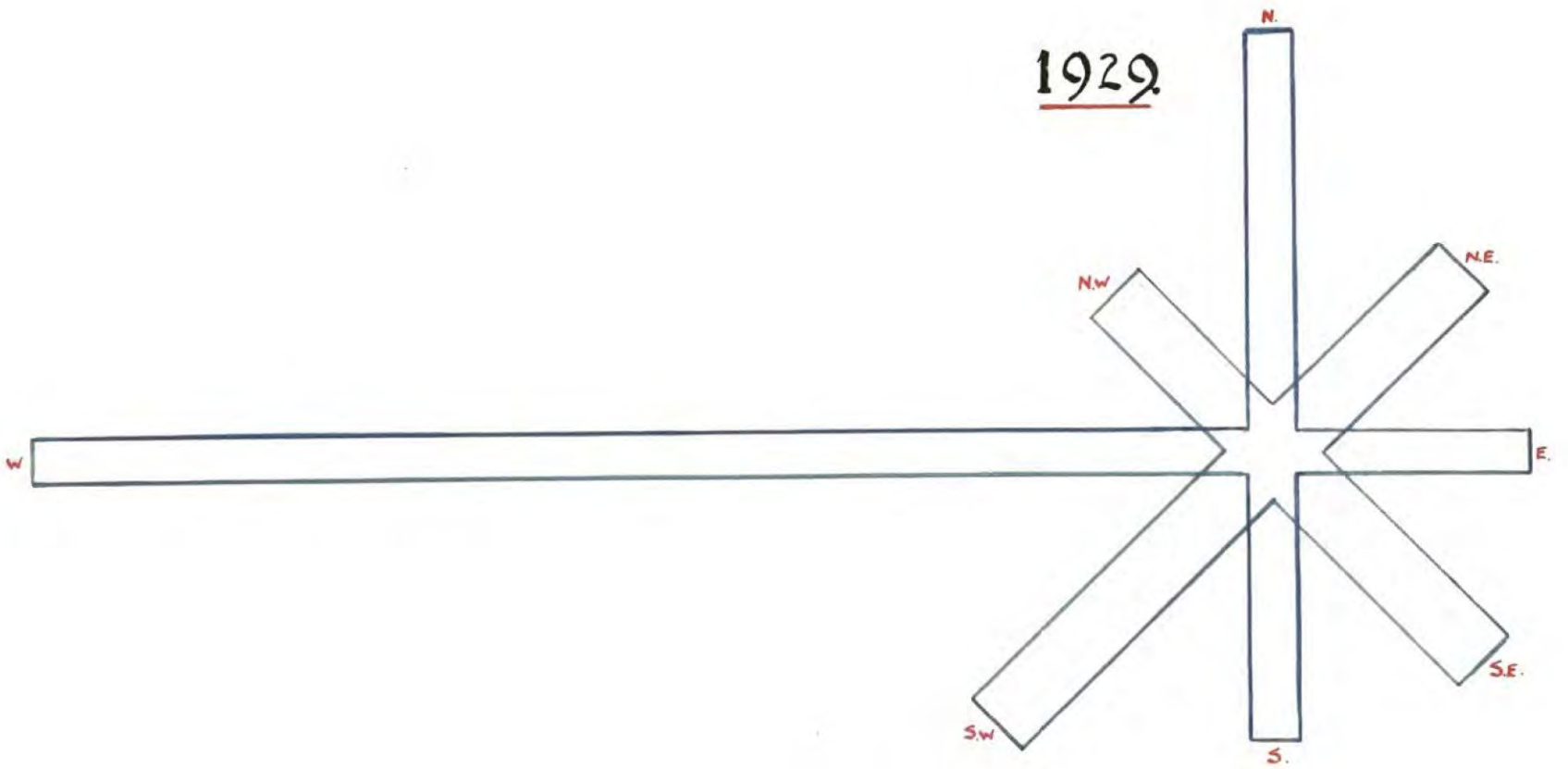
DISTRIBUTION OF SOILS.

17.

1930.



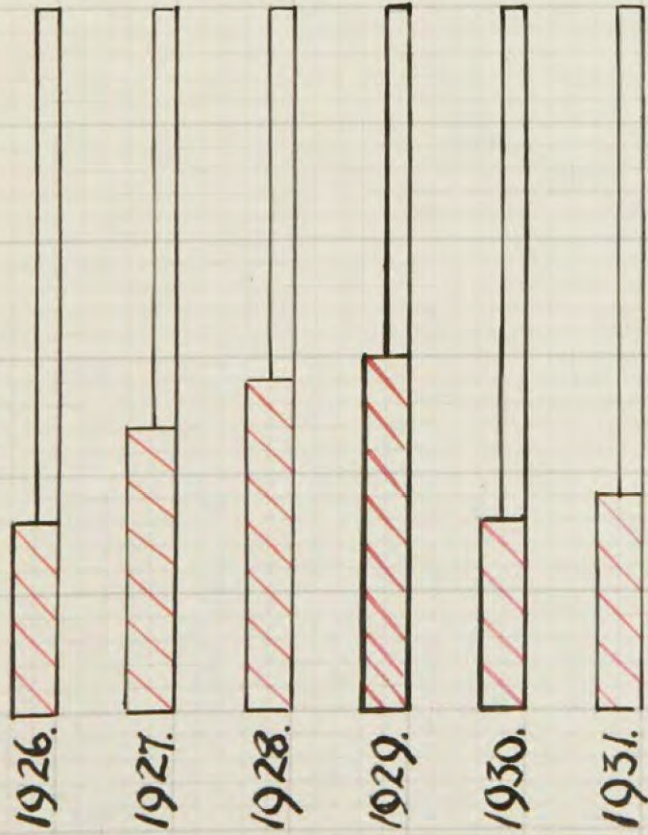
1929



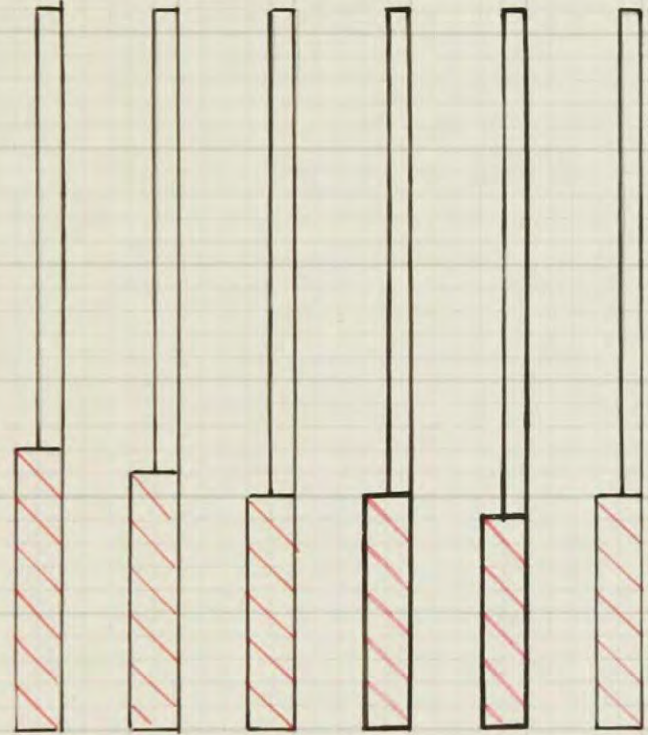
WIND DIRECTIONS. NOTTINGHAM. 1929 AND 1930.

SCALE. 1MM. = 1 DAY

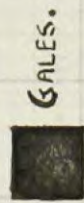
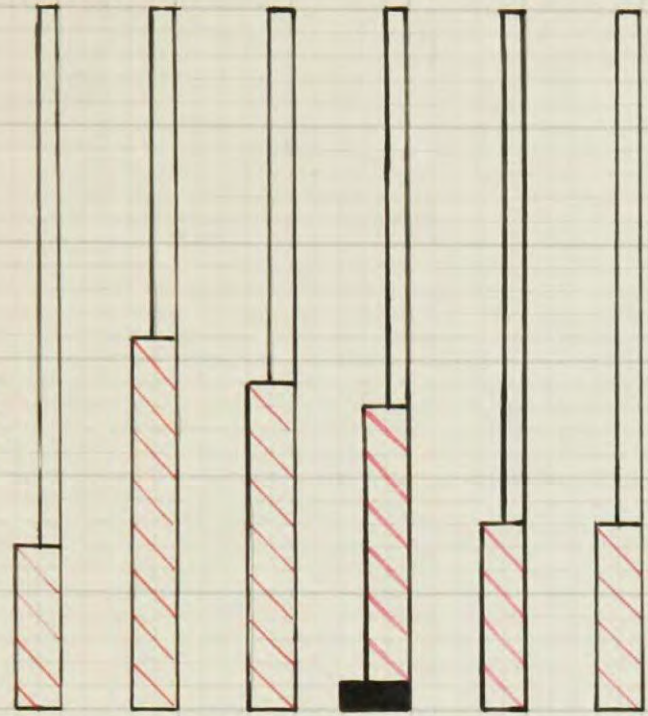
APRIL



MAY



JUNE



GALES.



STRONG WINDS.



MODERATE BREEZES.

HORIZONTAL SCALE $\frac{1}{16}$ " = 1 DAY.

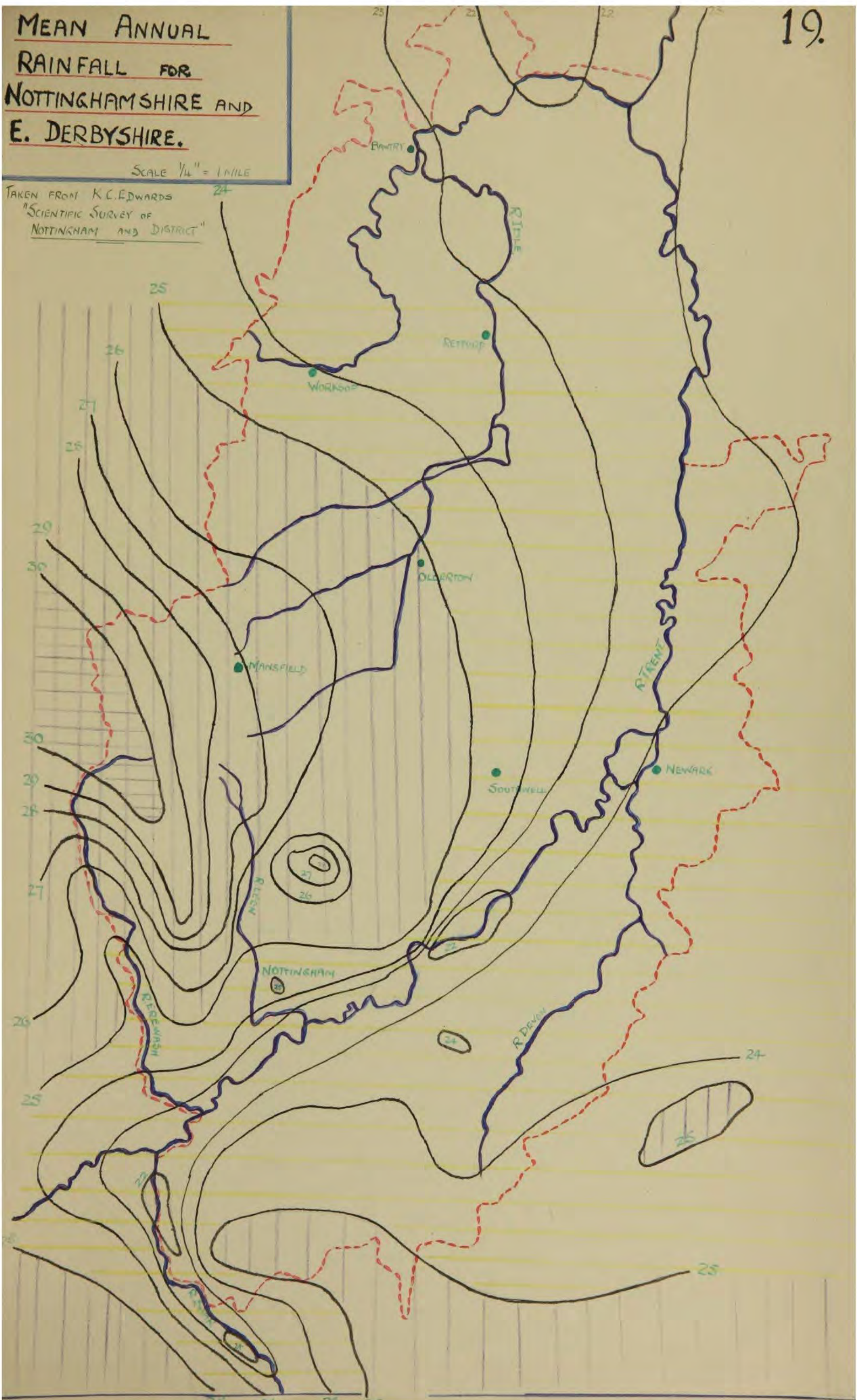
WIND STRENGTHS FOR APRIL, MAY AND JUNE, (1926 - 1931)

AT NOTTINGHAM

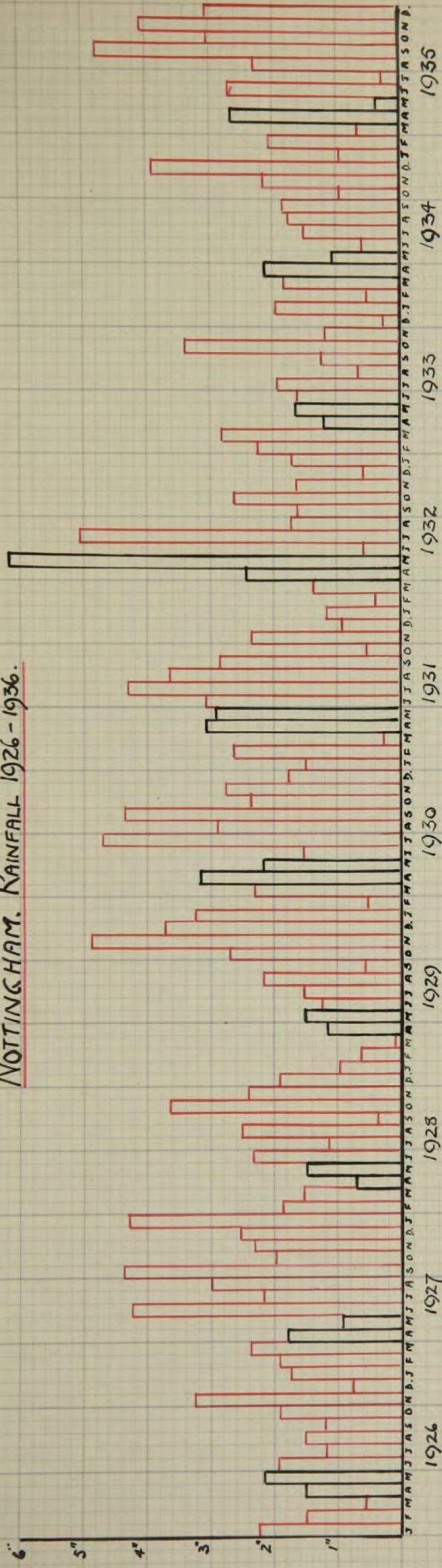
MEAN ANNUAL
RAINFALL FOR
NOTTINGHAMSHIRE AND
E. DERBYSHIRE.

SCALE $\frac{1}{4}$ " = 1 MILE

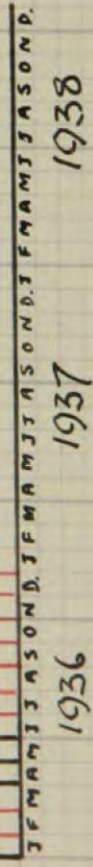
TAKEN FROM K.C. EDWARDS
"SCIENTIFIC SURVEY OF
NOTTINGHAM AND DISTRICT"



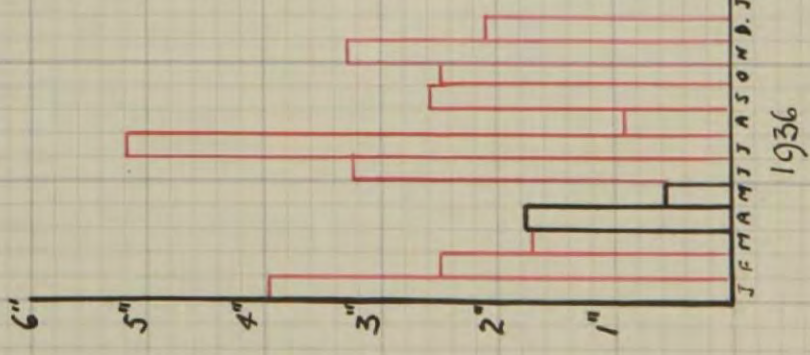
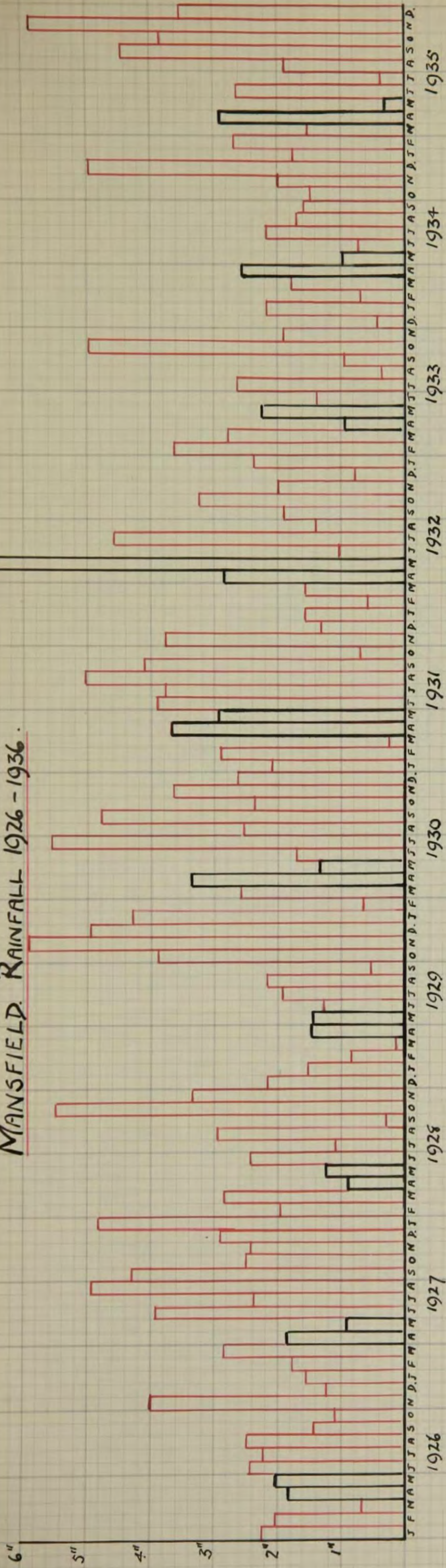
NOTTINGHAM. RAINFALL 1926-1936.



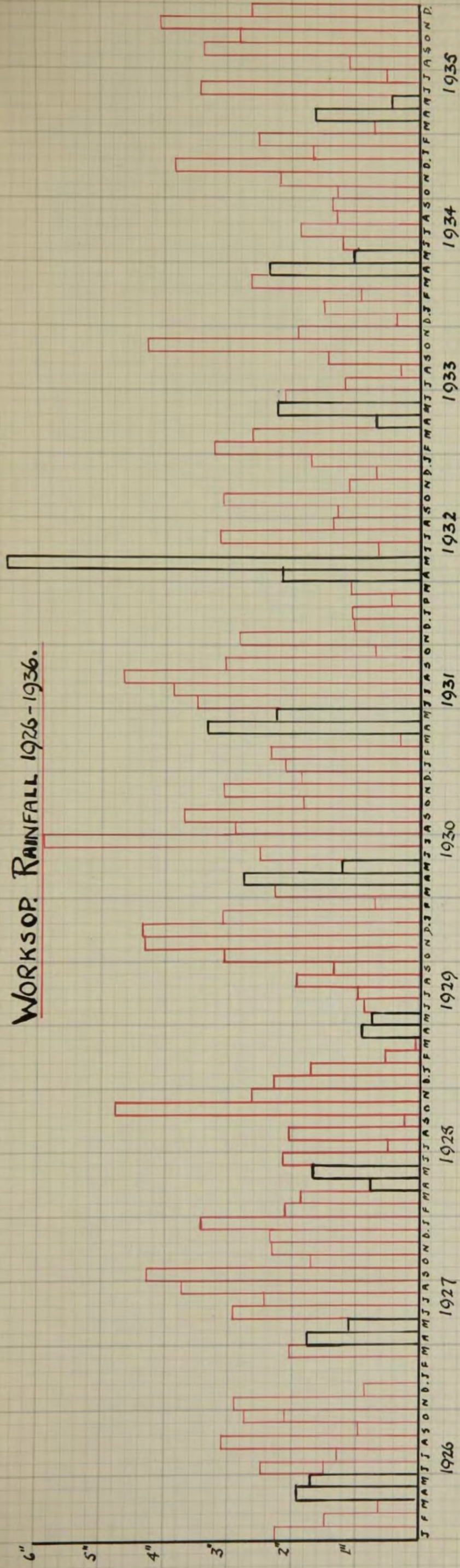
20.



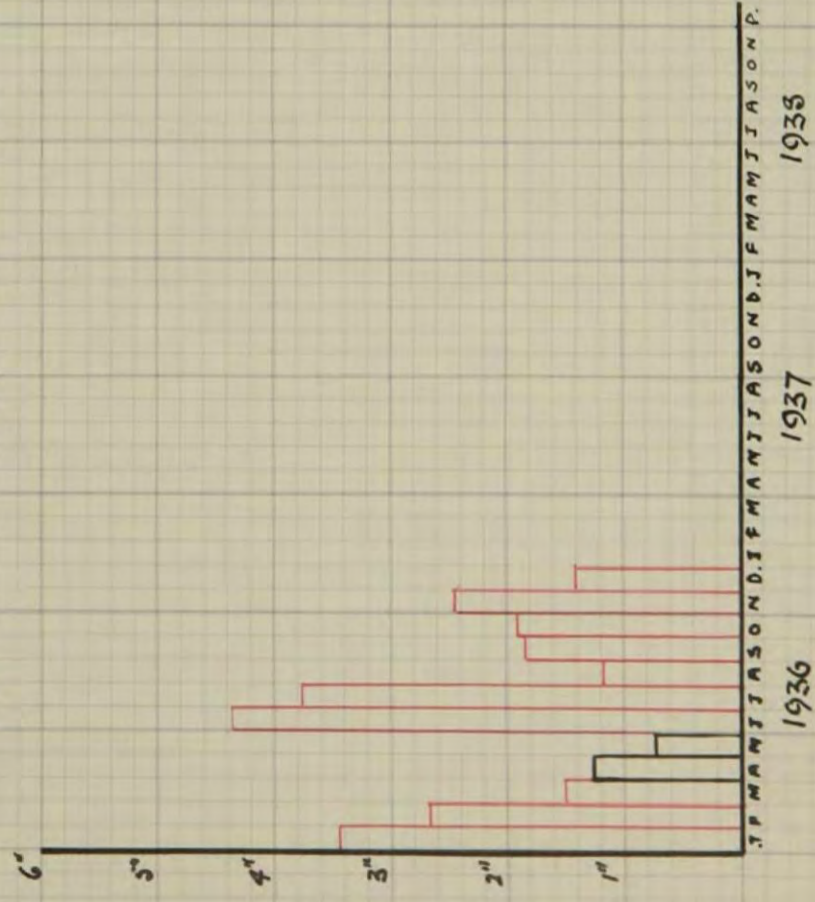
MANSFIELD. RAINFALL 1926 - 1936.



WORKSOP: RAINFALL 1926-1936.

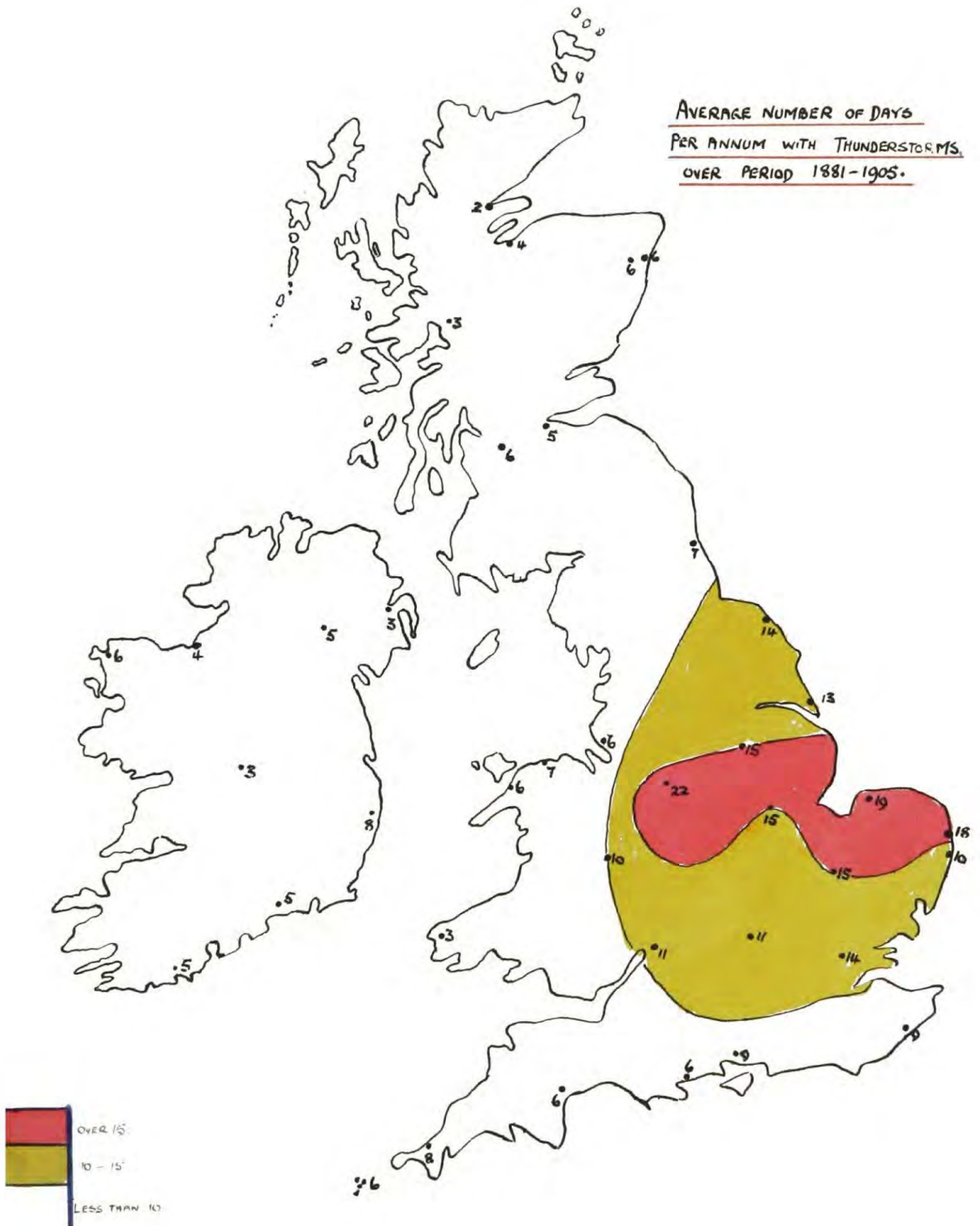


22.

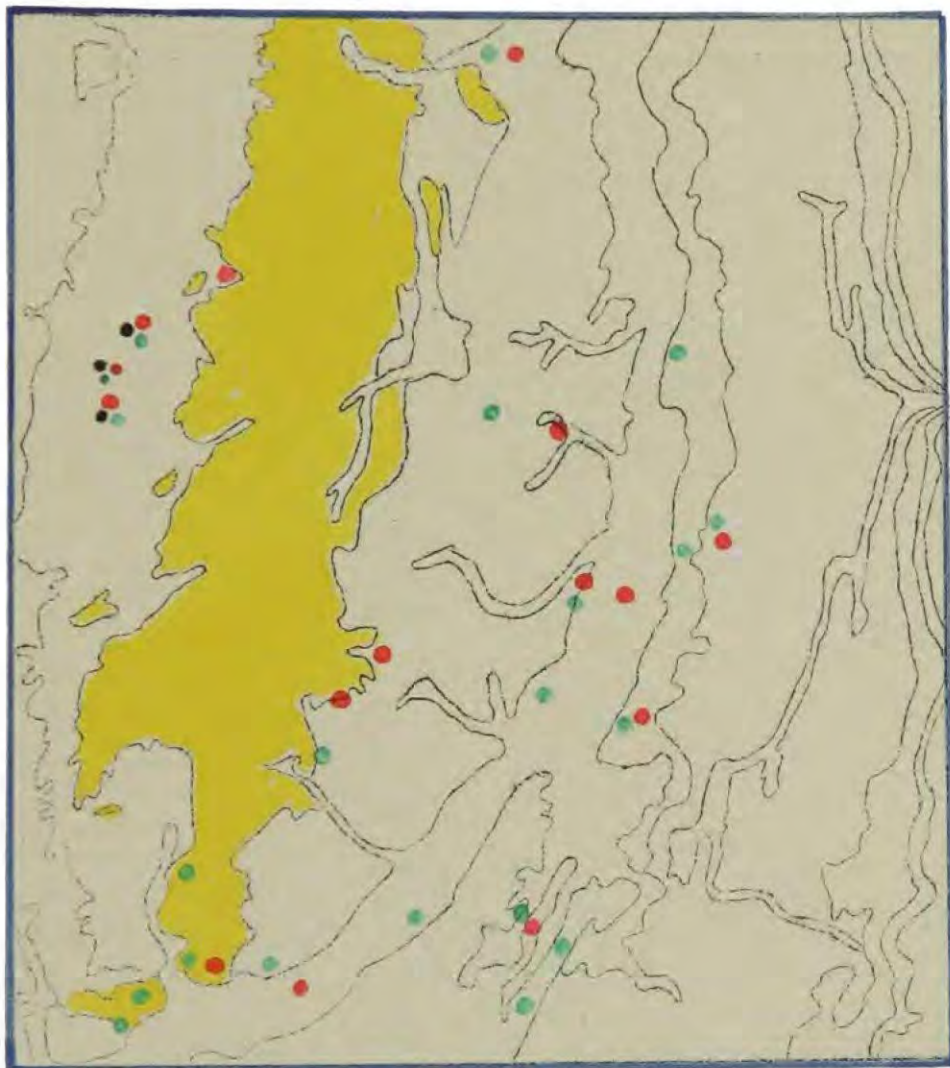


Summer?

23.

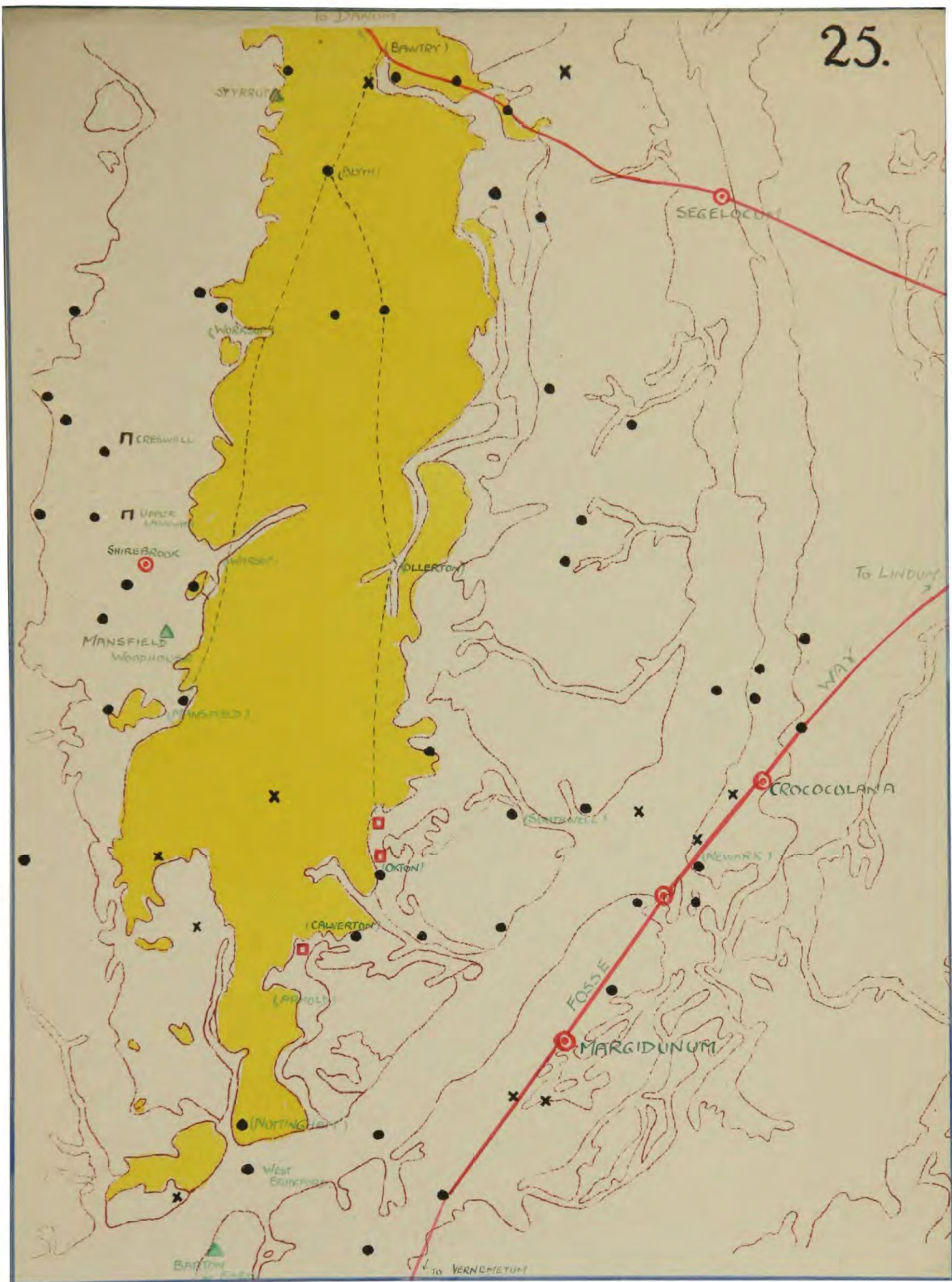


24.



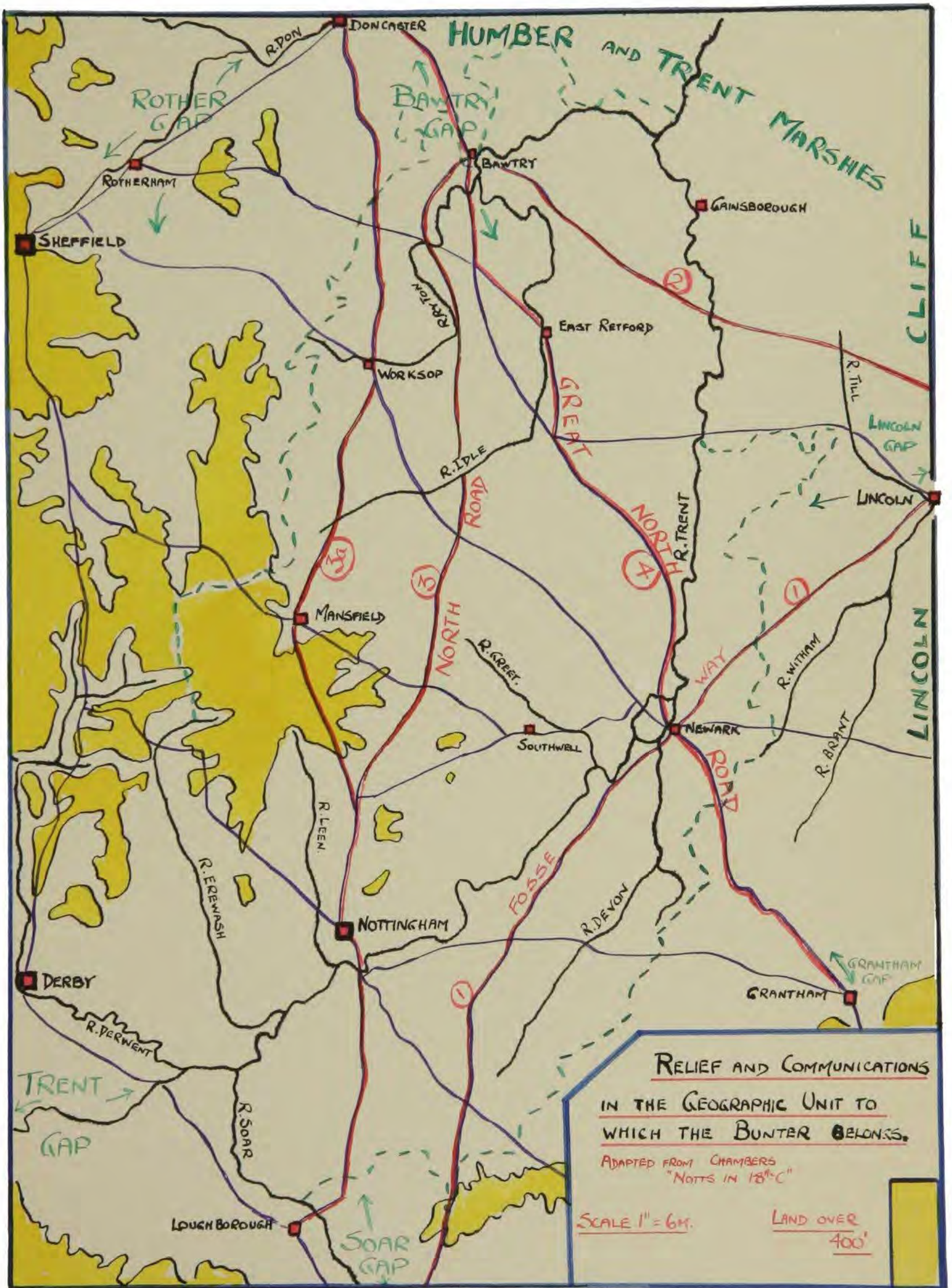
● PALAEO LITHIC ● NEOLITHIC ● BRONZE.

DISTRIBUTION OF PALAEO LITHIC, NEOLITHIC AND
BRONZE REMAINS.



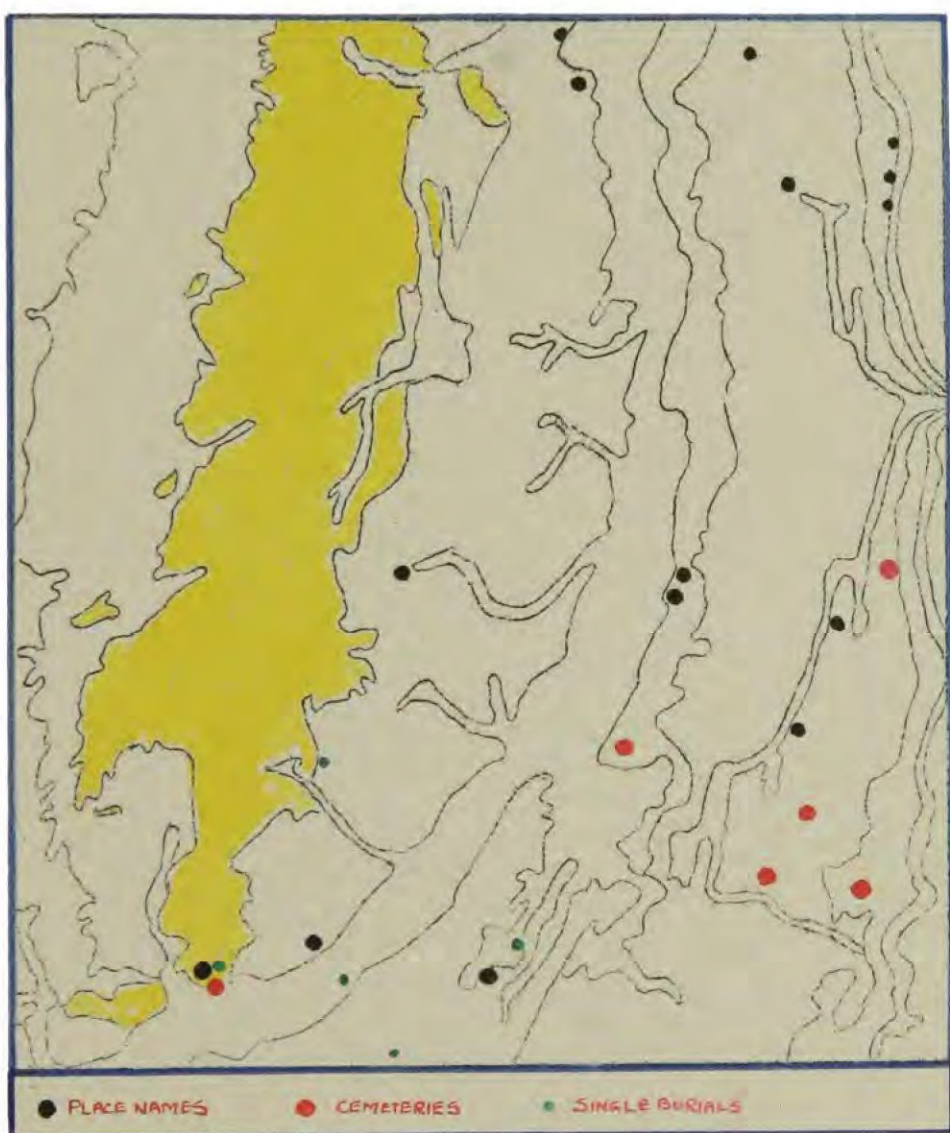
DISTRIBUTION OF ROMAN REMAINS.

- ⊙ VILLAGES.
- ▲ VILLAS.
- ▣ CAVES.
- ▣ CAMPS.
- SMALL FINDS.
- × DOUBTFUL FINDS.
- ROADS
- - - DOUBTFUL ROADS



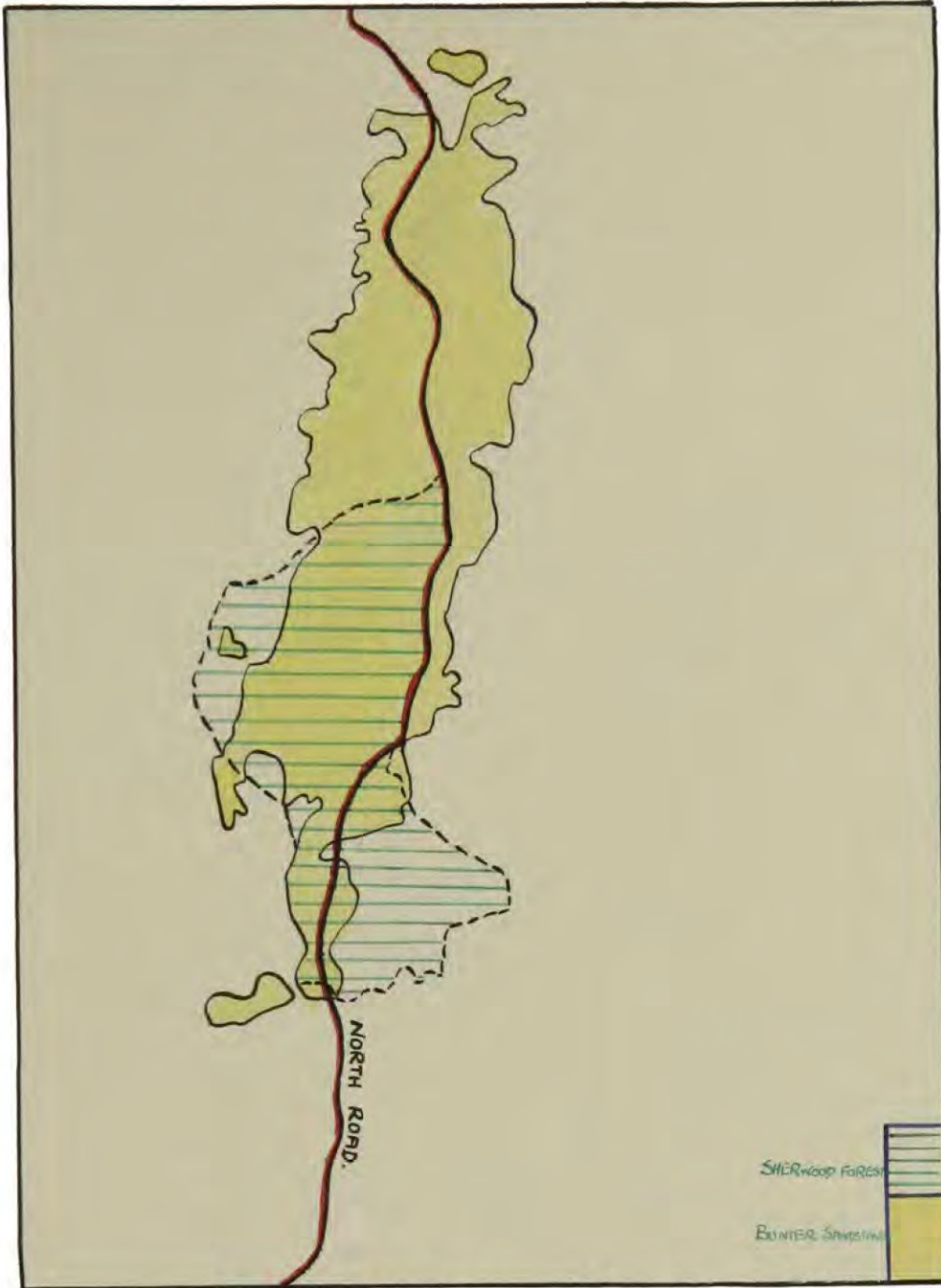


THE ENTRY OF THE ENGLISH.



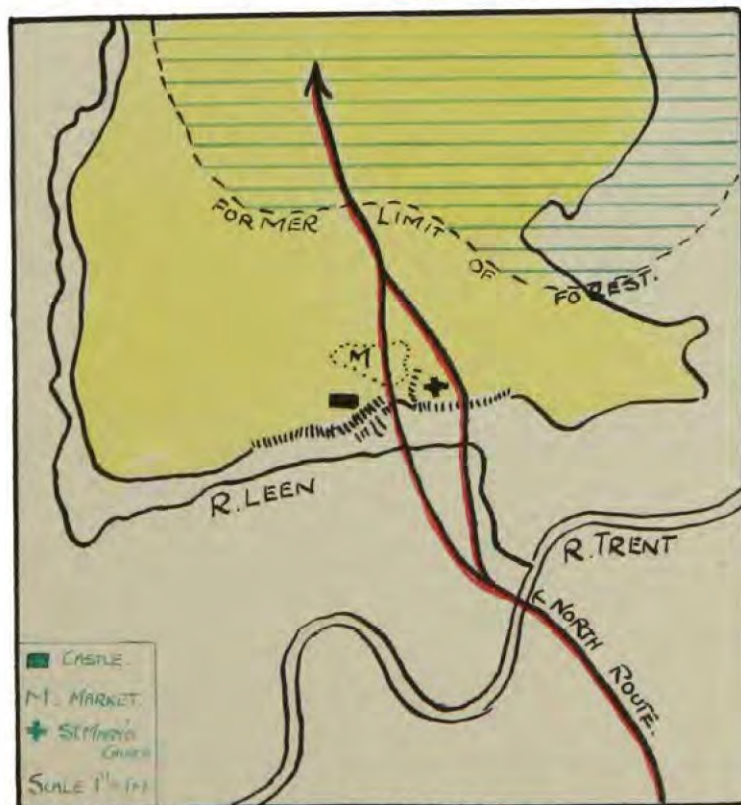
DISTRIBUTION OF PLACE-NAMES ENDING IN
-ING AND -INGHAM, AND OF ENGLISH
CEMETERIES.

29. AND 35.



THE EXTENT OF THE SHERWOOD FOREST
IN THE 12th AND 13th CENTURIES.

ADAPTED FROM "ECOLOGY OF BUNTER
SANDSTONE" (J.O.F.E.C. 1927
FEB.)



THE SITE OF NOTTINGHAM.

FROM EDWARDS. "SCIENTIFIC SURVEY OF NOTTINGHAM"

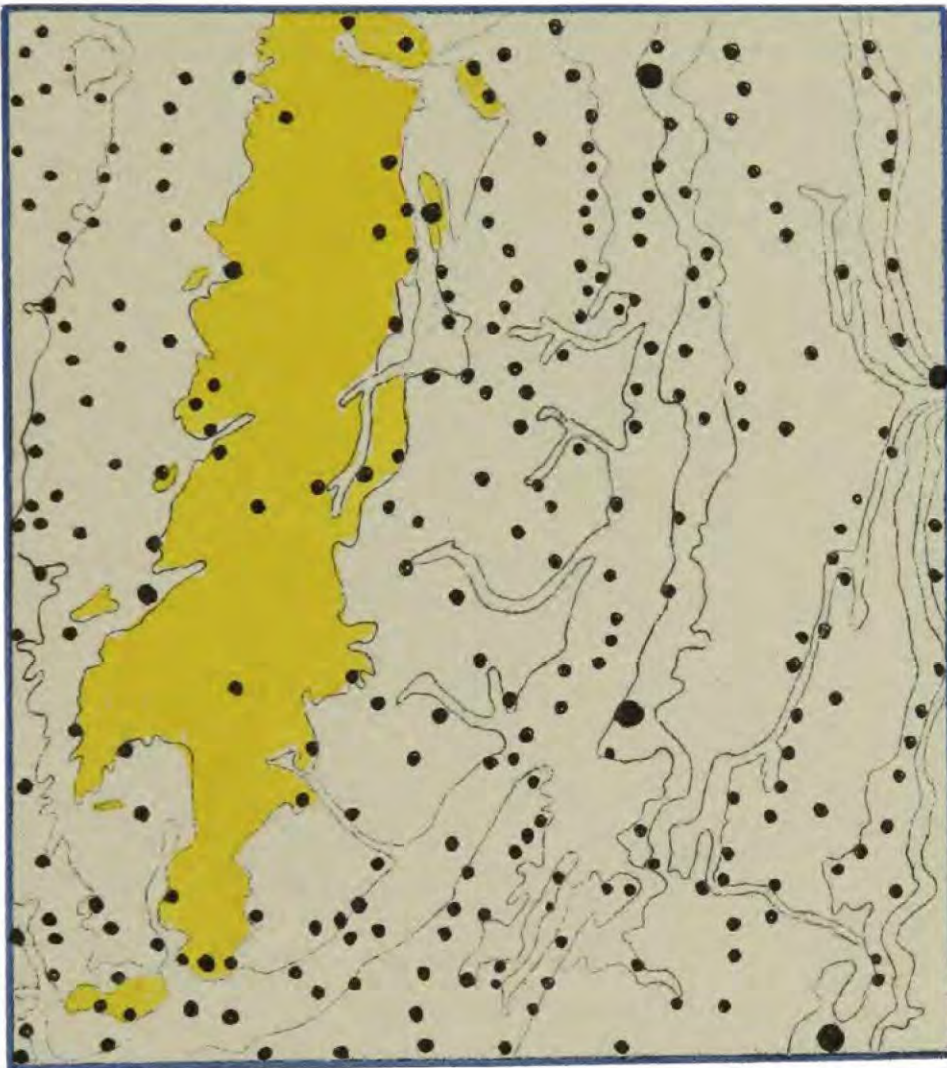
29.

30.

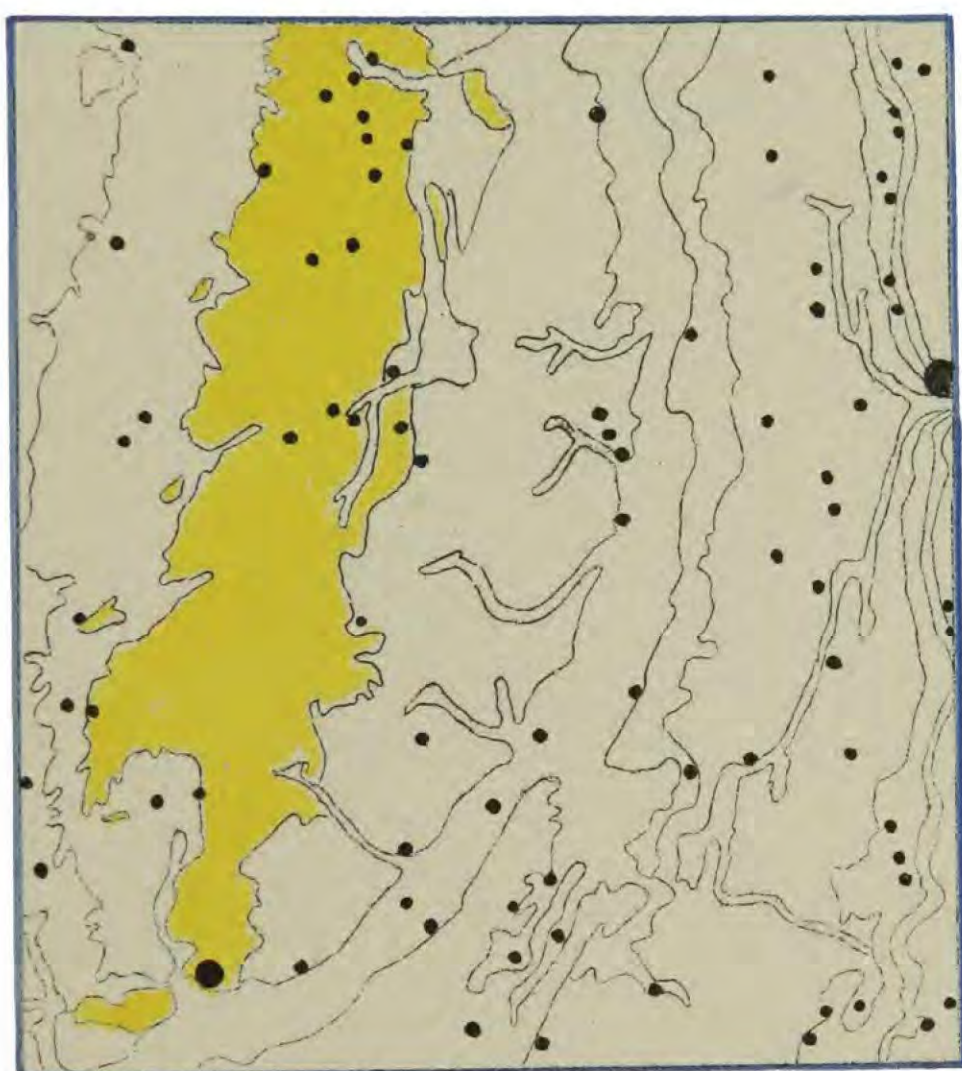


DISTRIBUTION OF PLACE-NAMES ENDING IN
- LEY, - FIELD AND CONTAINING - WOOD.

31.

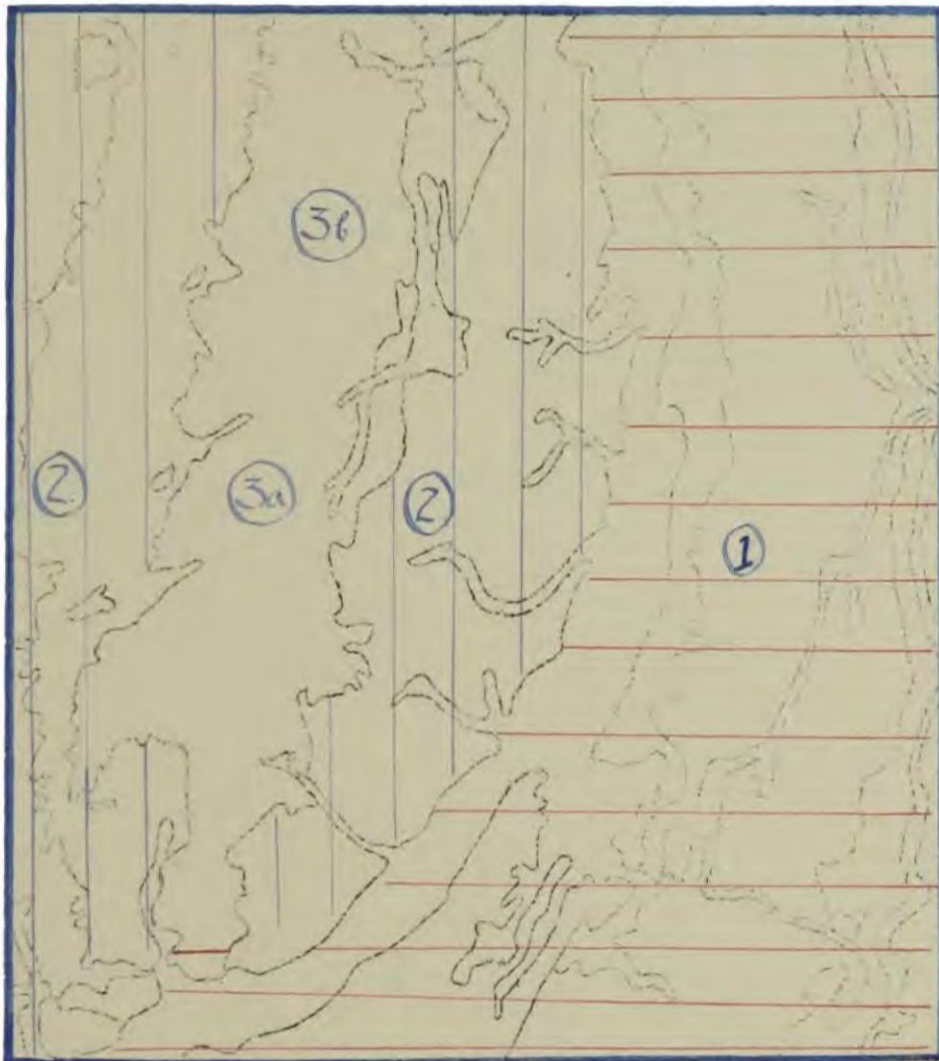


FINAL ENGLISH SETTLEMENTS.



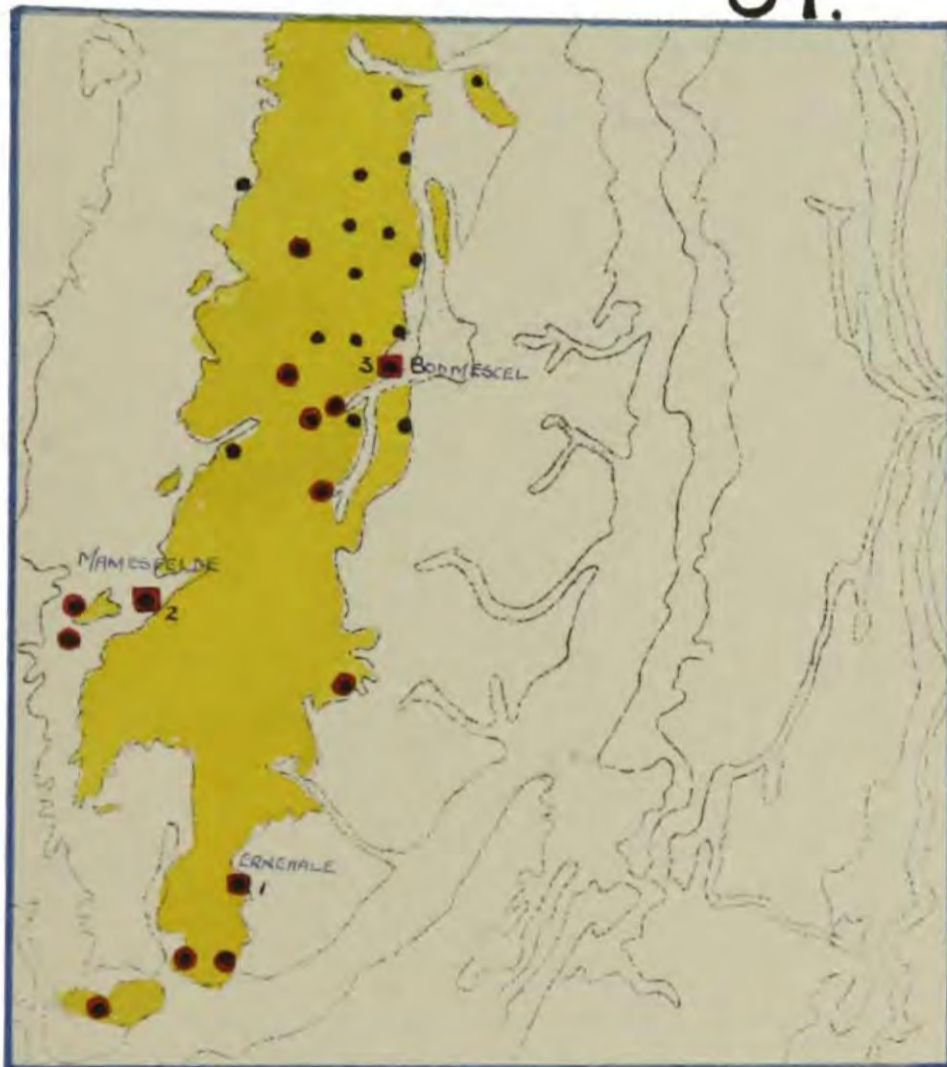
DISTRIBUTION OF SCANDINAVIAN NAMES ENDING IN
- BY, - THORPE, - THWATE, AND OF PERSONAL NAMES.

33.



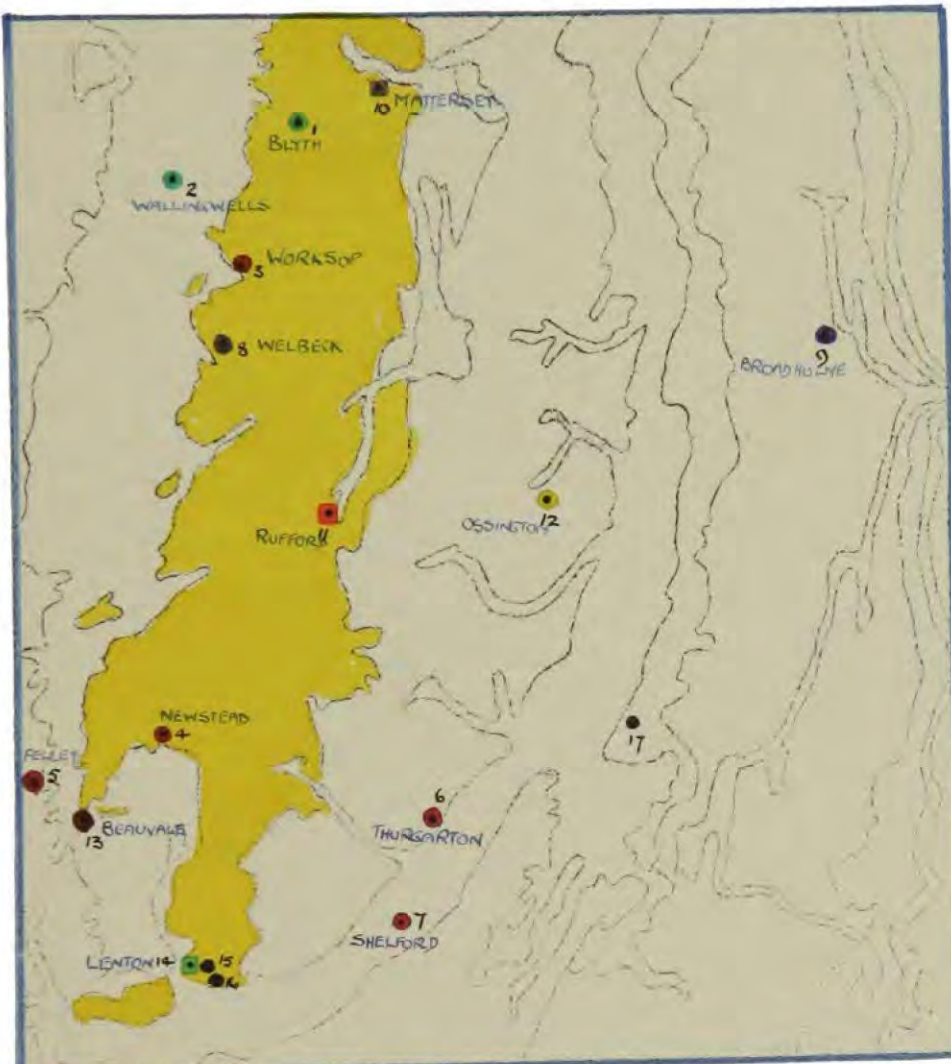
GENERAL ORDER OF SETTLEMENT.

34.



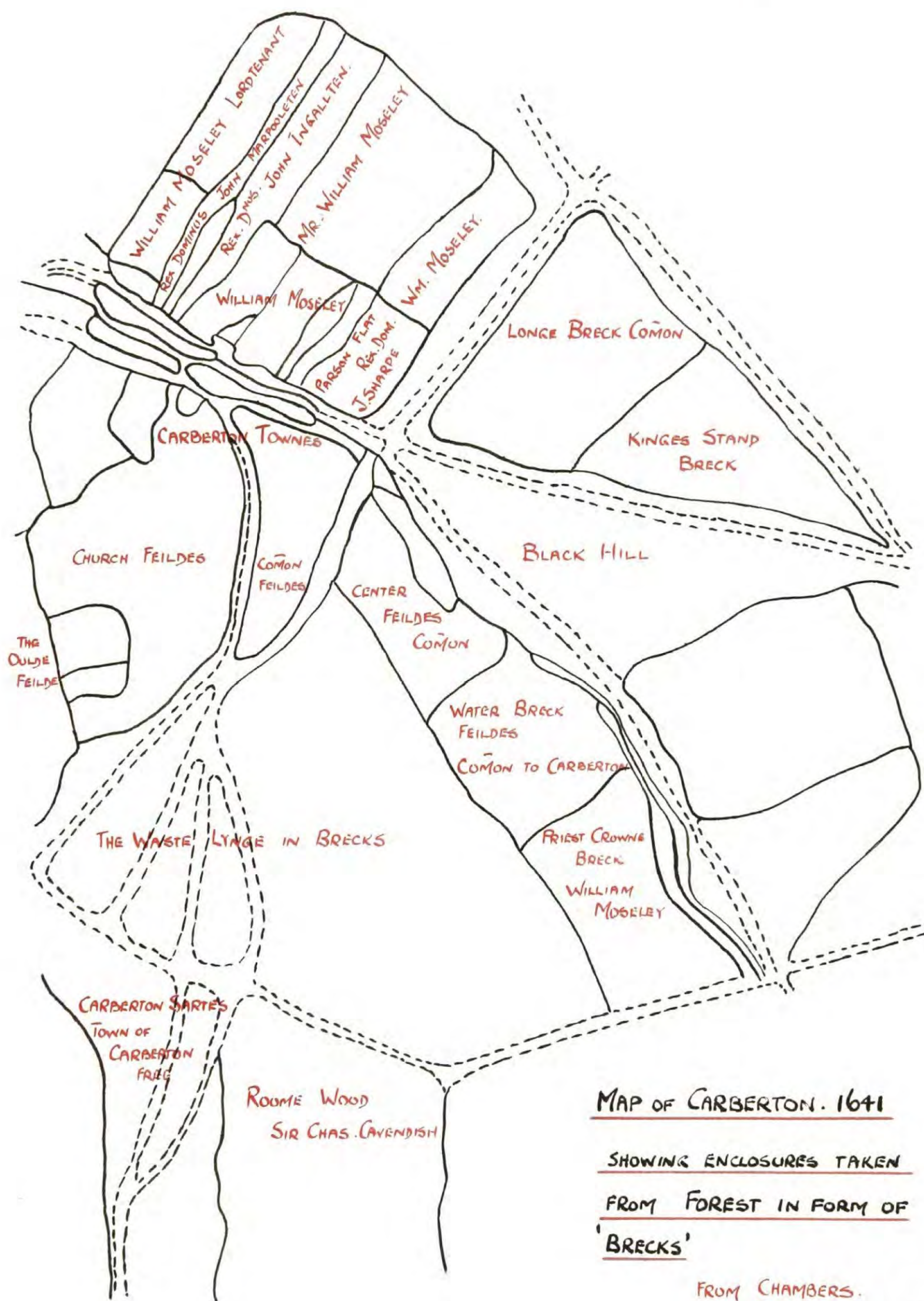
■ ROYAL MANORS ● MANORS PARTLY UNDER
" " ROYAL OWNERSHIP

THE KING'S MANORS ON
THE BUNTER OUTCROP.



- | | | |
|----------------------|-----------------------------|-------------------------|
| 1. BENEDICTINE MONKS | 6. AUSTIN CANONS | 11. CISTERCIAN MONKS |
| 2. BENEDICTINE NUNS | 7. " " | 12. KNIGHTS HOSPITALERS |
| 3. AUSTIN CANONS | 8. PREMONSTRATENSIAN CANONS | 13. CARthusIAN MONKS |
| 4. " " | 9. " CANONesses | 14. CLUNIAN MONKS |
| 5. " " | 10. GILBERTINE CANONS | 15. } FRIARS |
| | | 16. } |
| | | 17. } |

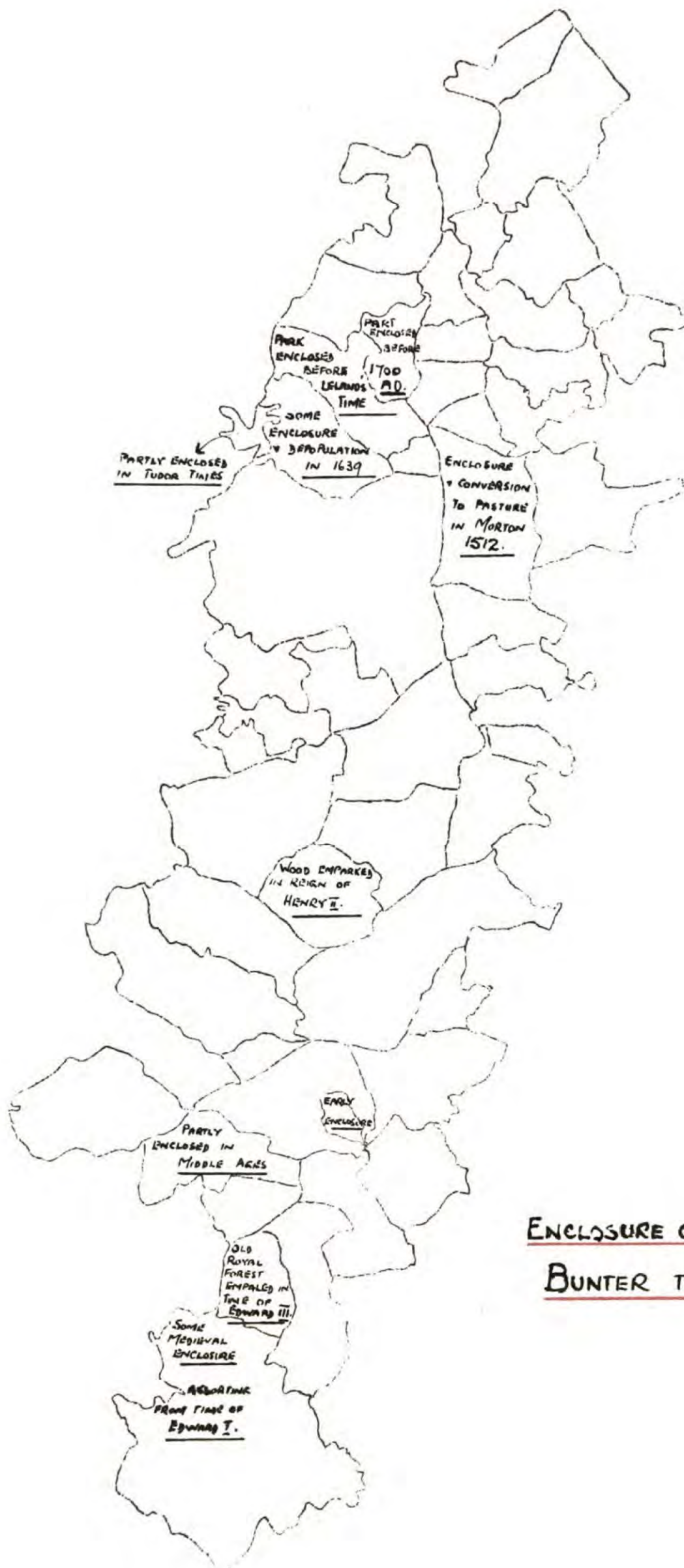
RELIGIOUS HOUSES OF NOTTS.



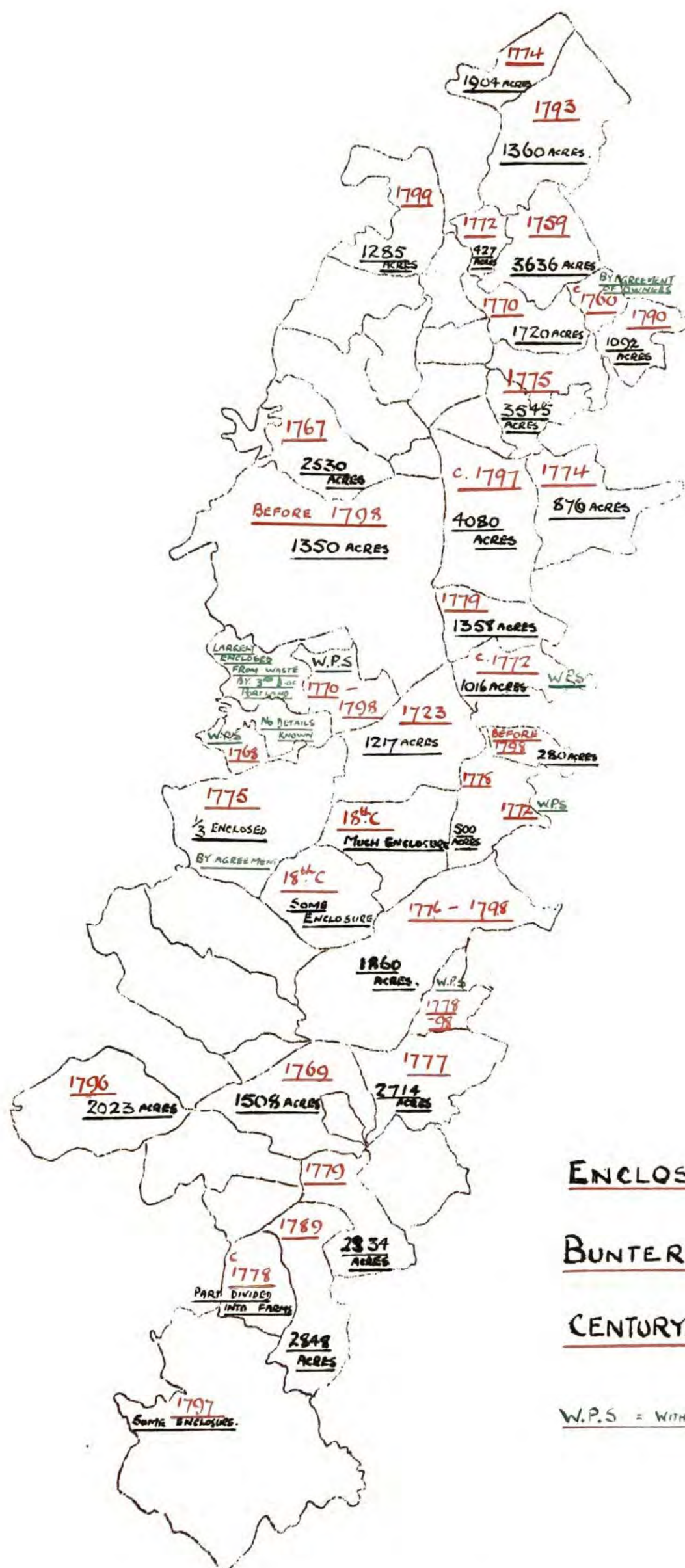
MAP OF CARBERTON. 1641

SHOWING ENCLOSURES TAKEN
FROM FOREST IN FORM OF
'BRECKES'

FROM CHAMBERS.
"NOTTS IN THE 18th C."

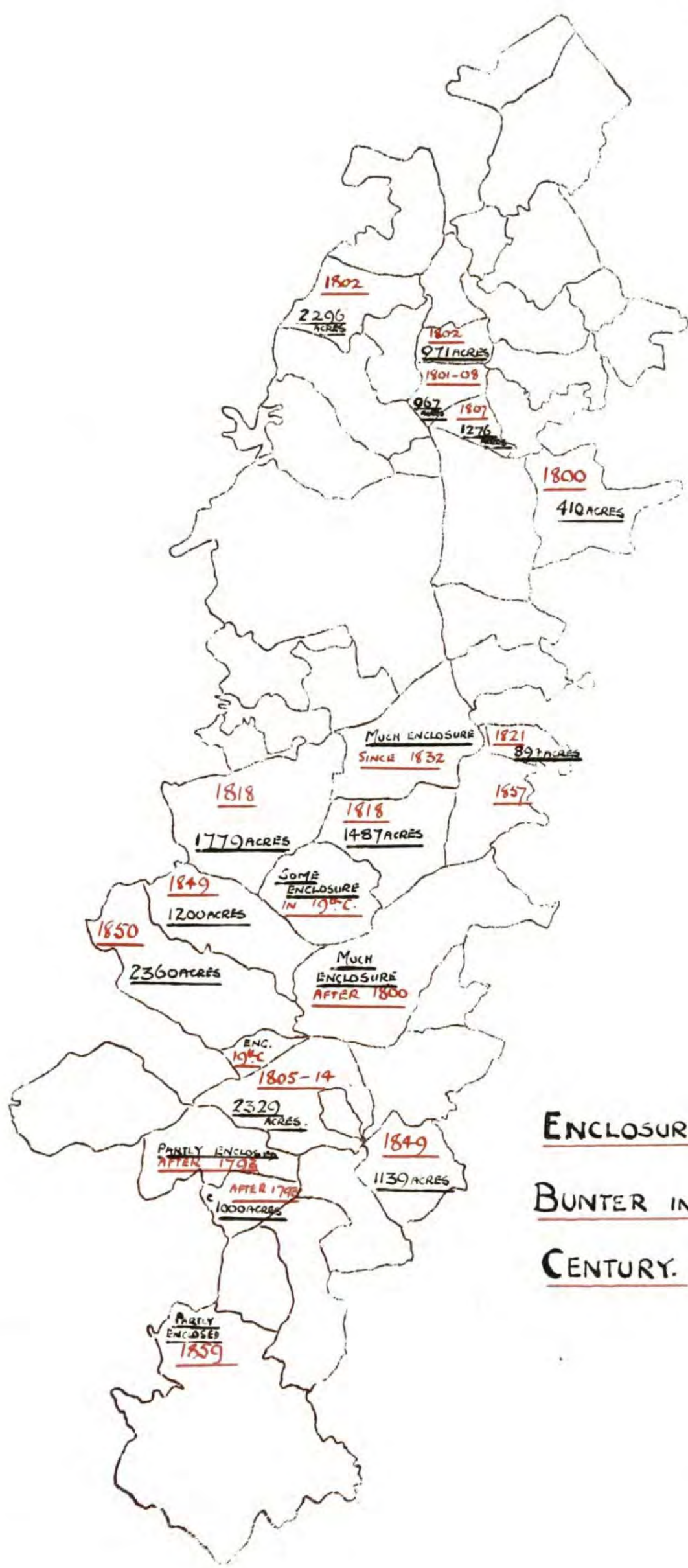


ENCLOSURE ON THE
BUNTER TO 1700 A.D.

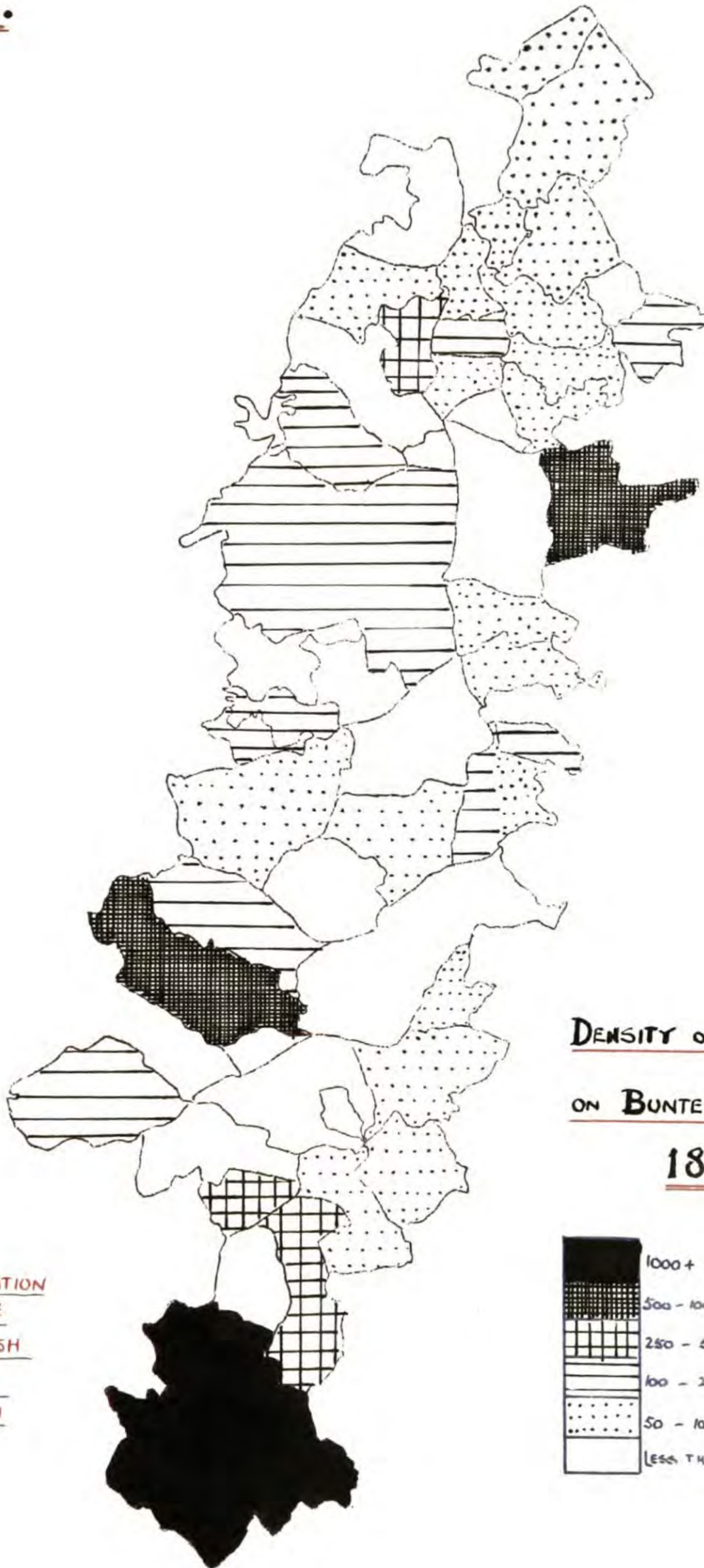


ENCLOSURE ON THE
BUNTER IN THE 18th
CENTURY.

W.P.S = WITHOUT PARLIAMENTARY
SANCTION.



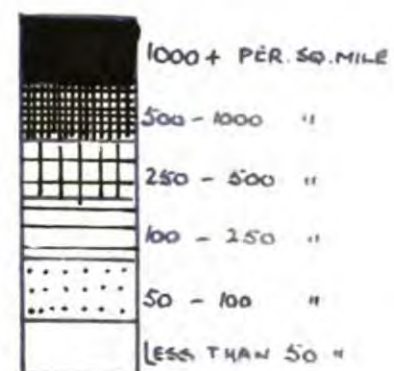
ENCLOSURE ON THE
BUNTER IN THE 19th
CENTURY.



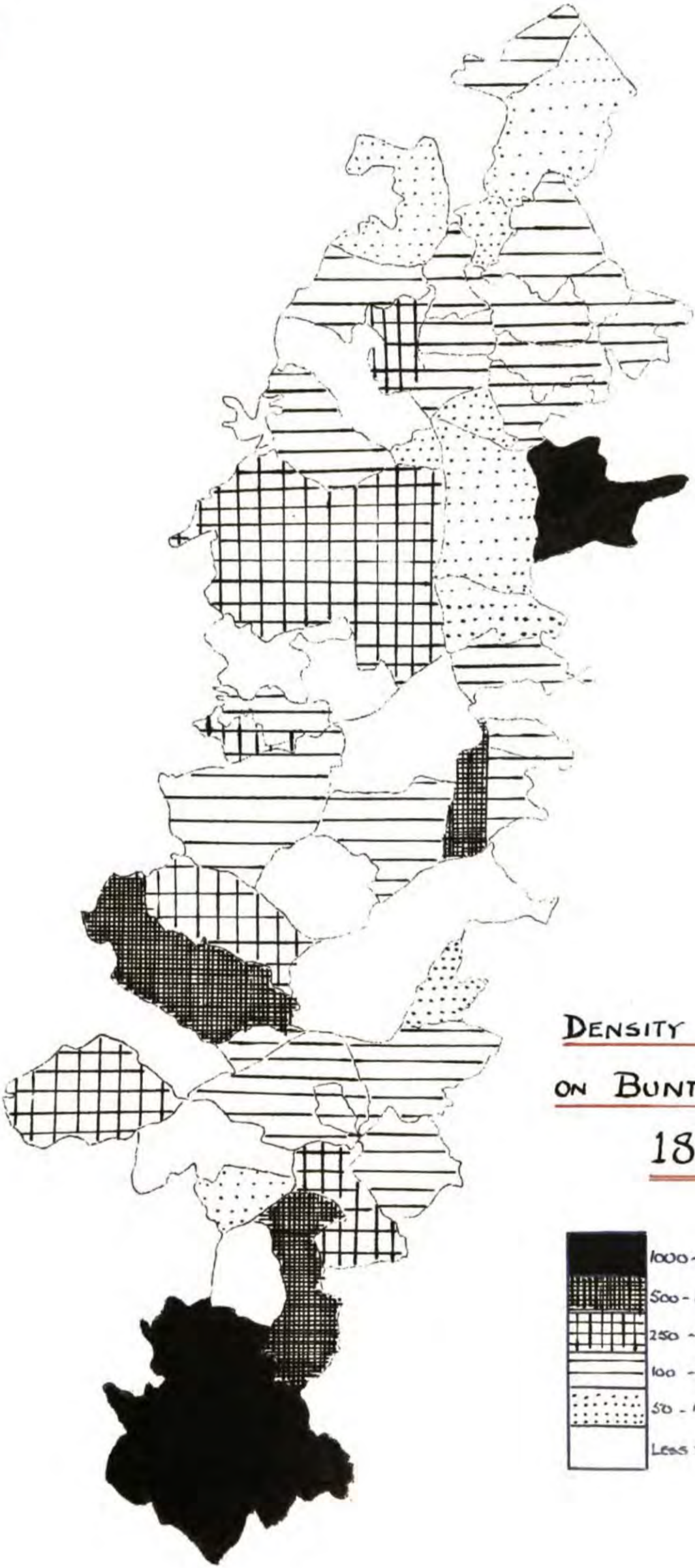
DENSITY OF POPULATION

ON BUNTER OUTCROP.

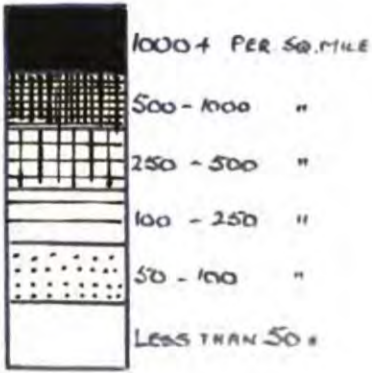
1801.



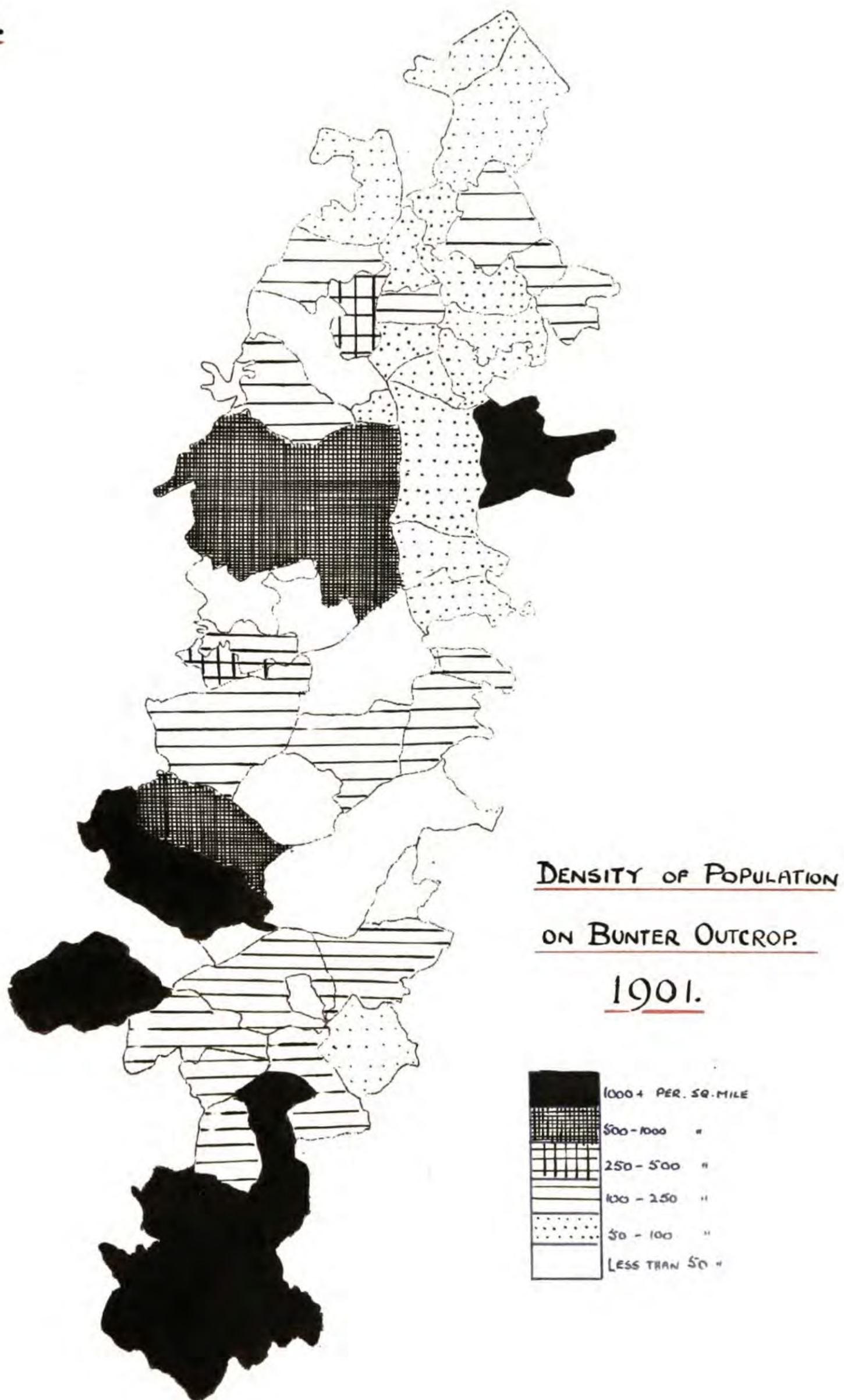
N.B.
FOR THIS
SERIES
OF POPULATION
MAPS THE
1931 PARISH
BOUNDARIES
HAVE BEEN
USED.

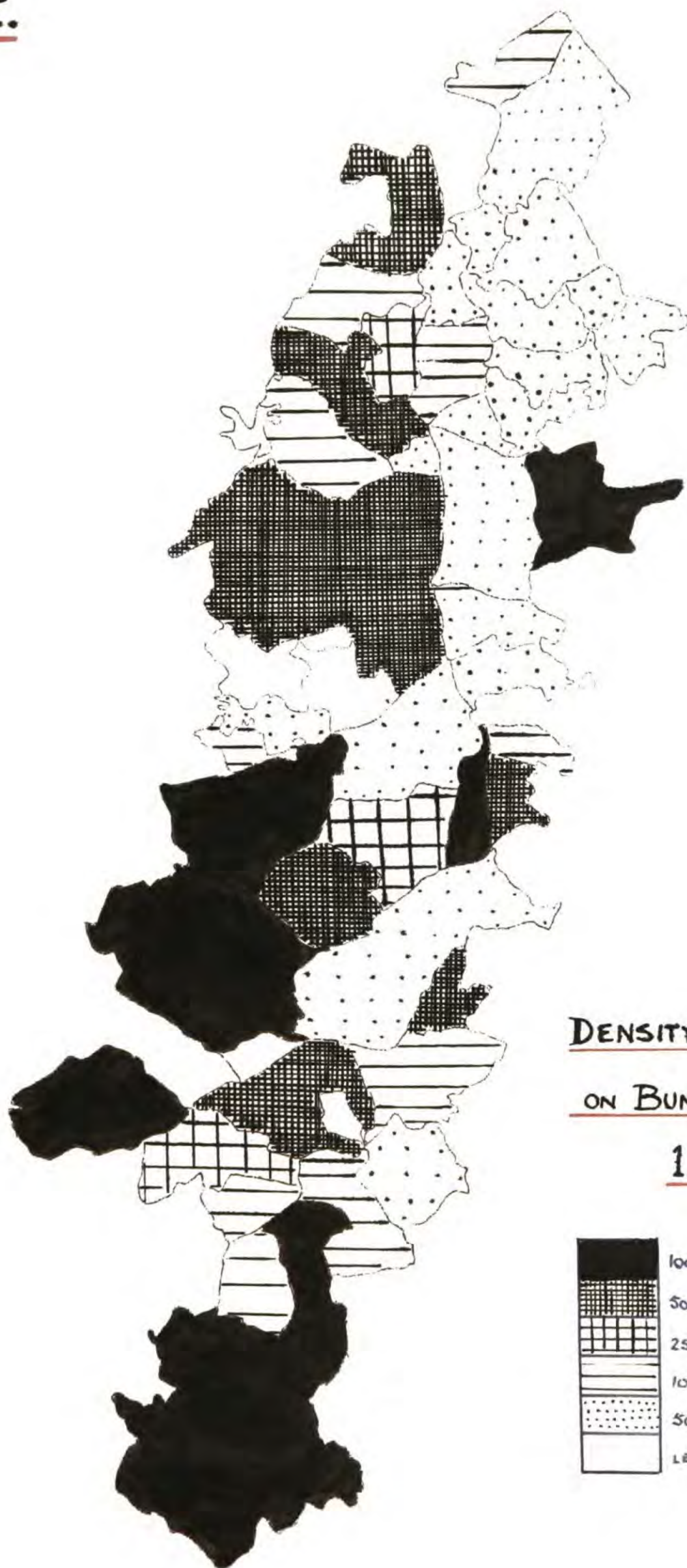


DENSITY OF POPULATION
ON BUNTER OUTCROP.
1851.




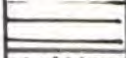




43.



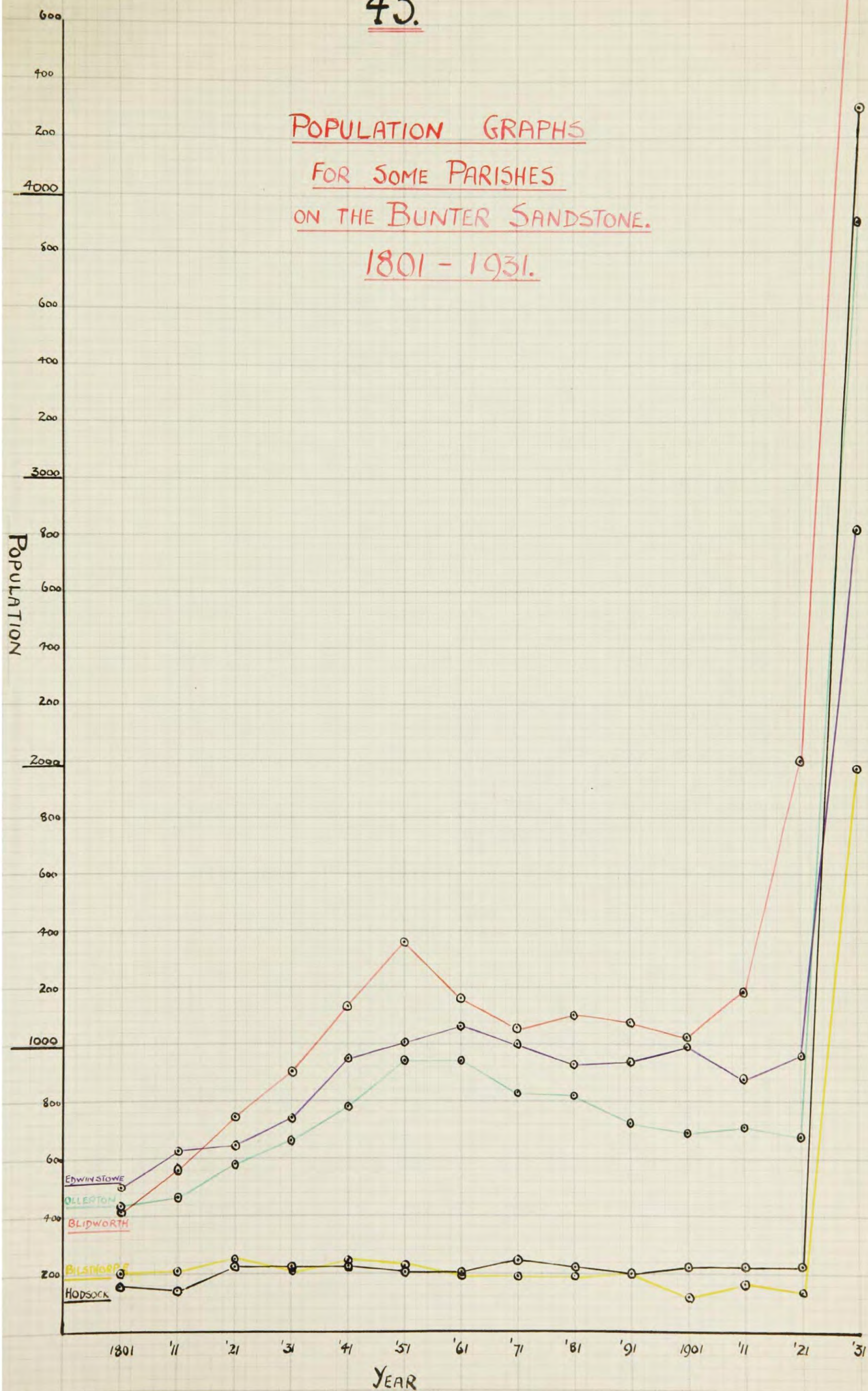


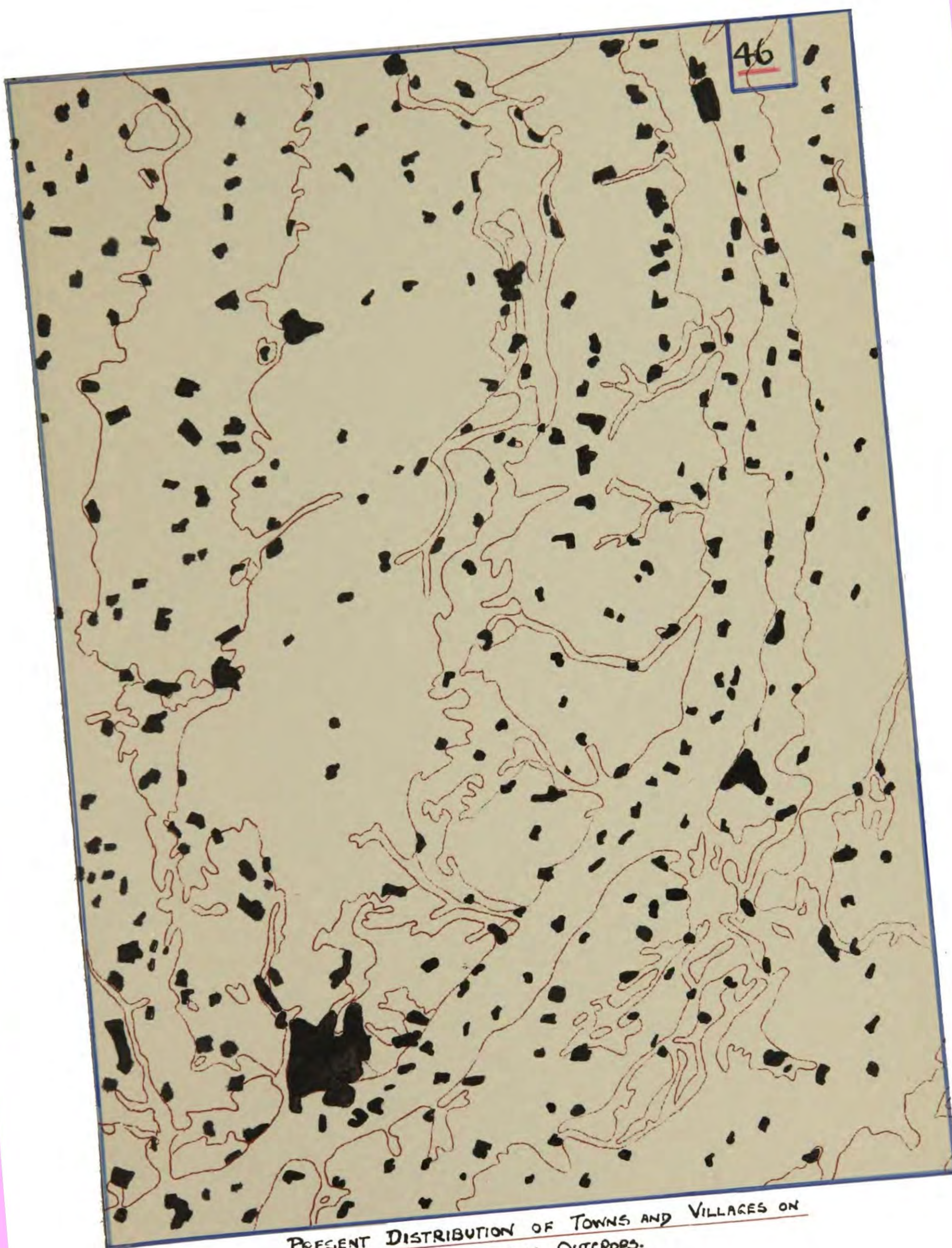
DENSITY OF POPULATION
ON BUNTER OUTCROP.
1931.

	1000 + PER. 50 MILE
	500 - 1000 "
	250 - 500 "
	100 - 250 "
	50 - 100 "
	LESS THAN 50 "

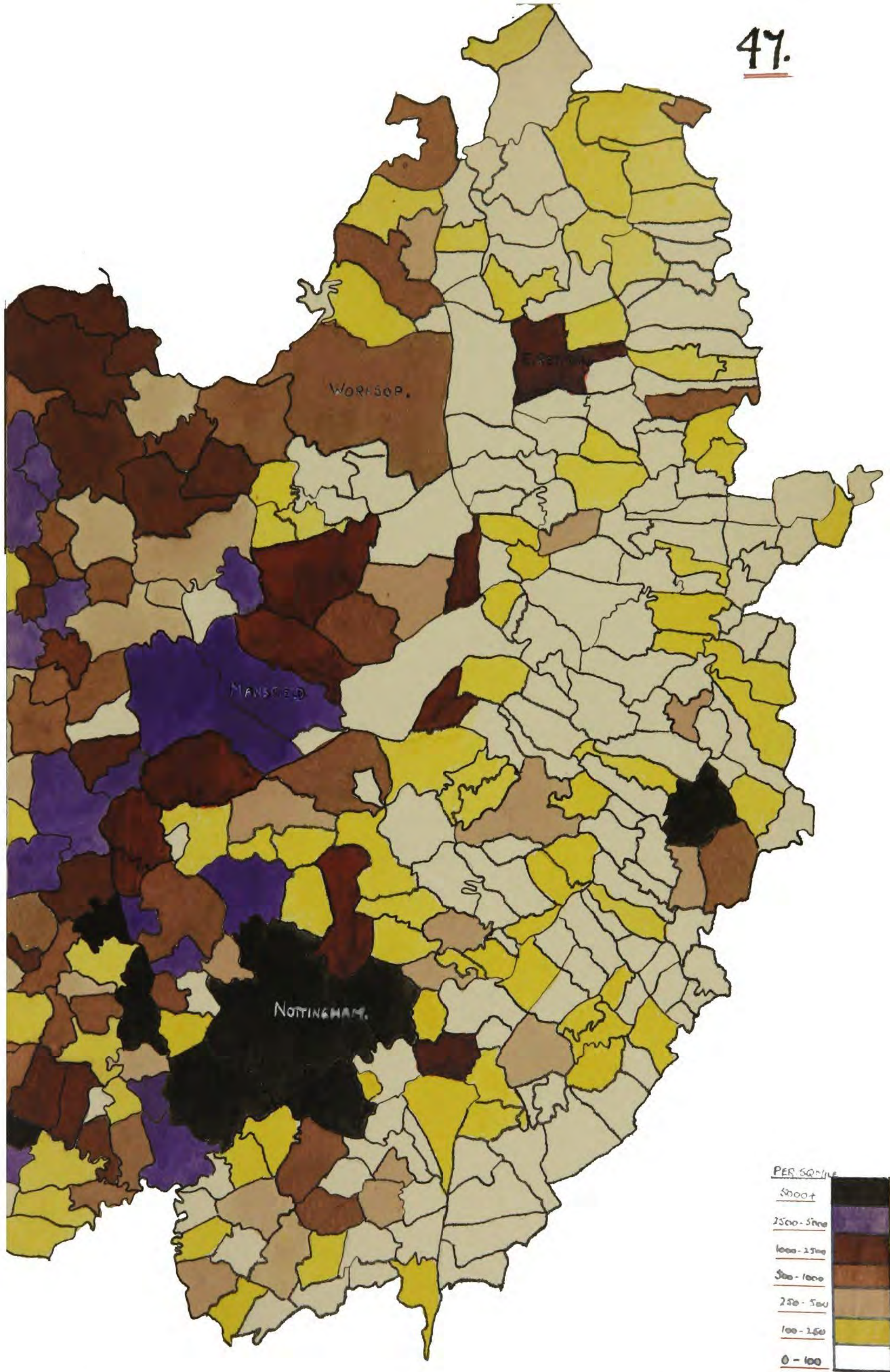
45.

POPULATION GRAPHS
FOR SOME PARISHES
ON THE BUNTER SANDSTONE.
1801 - 1931.





PRESENT DISTRIBUTION OF TOWNS AND VILLAGES ON
BUNTER AND NEIGHBOURING OUTCROPS.

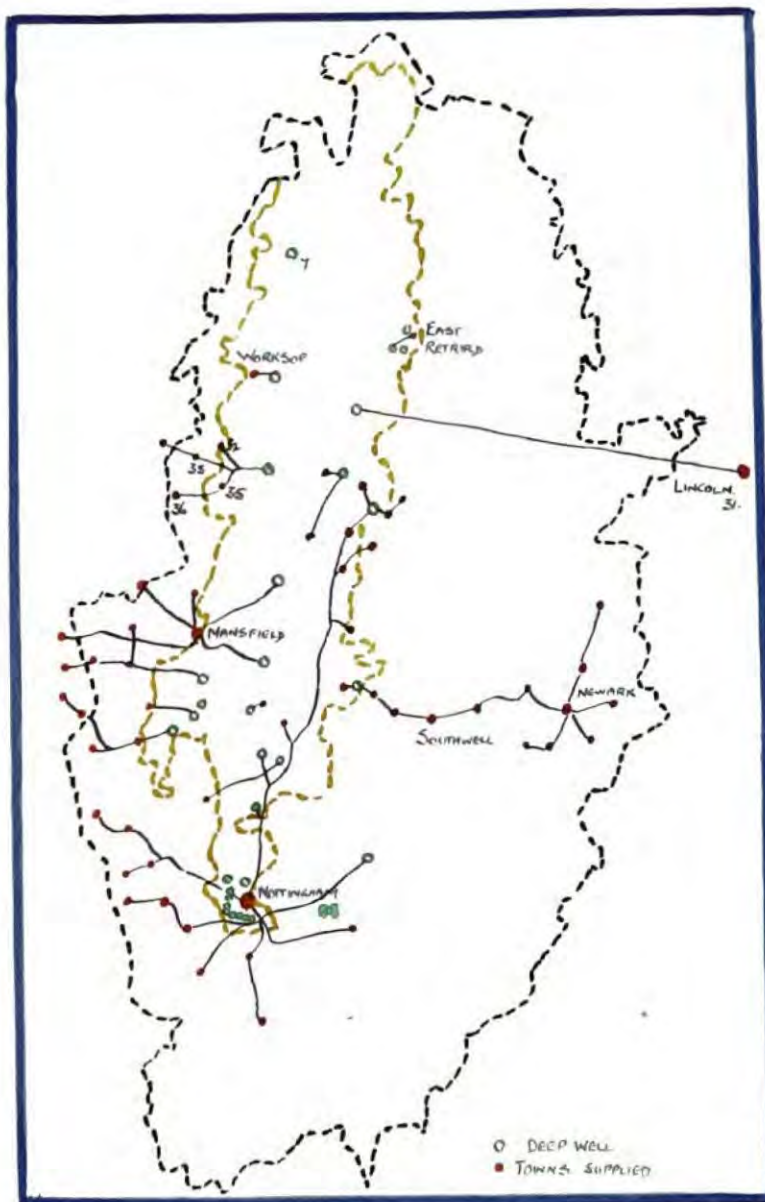


POPULATION. NOTTINGHAMSHIRE AND EAST DERBYSHIRE.
1931.

TOWNS AND VILLAGES

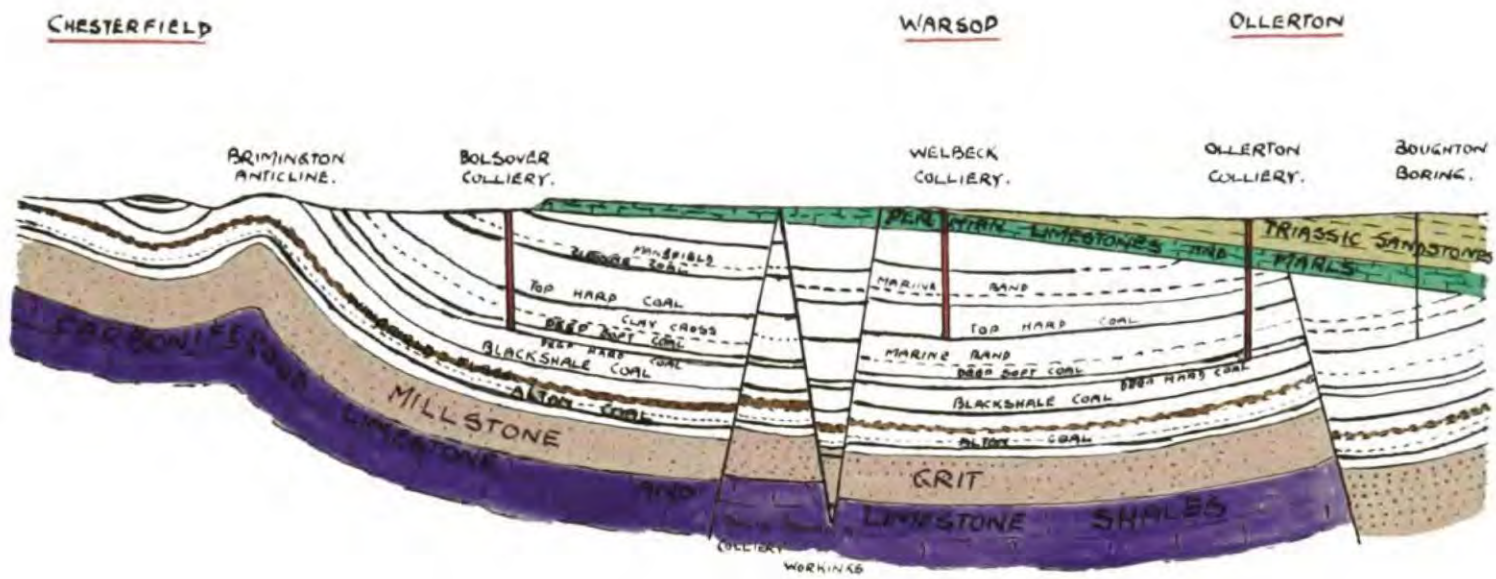
SUPPLIED FROM BUNTER.

- | | |
|----------------------------|-----------------------|
| 1. BAWTRY | 2. EVERTON |
| 3. SKEDBY | 4. MATTERSEY |
| 5. HARWORTH | 6. STYRRUP |
| 7. BLYTH | 8. RANSKILL |
| 9. SUTTON - LOUND | 10. BARNBY MOOR |
| 11. OLJCOTES | 12. HOSOCK |
| 13. CARLTON - IN LINCOLN | 14. RETFORD |
| 15. ORDSALL | 16. WEHAM |
| 17. WORKSOP | 18. BABWORTH |
| 19. RANBY | 20. OSBERTON |
| 21. NEWARK | 22. WELLOW |
| 23. BILSTHORPE | 24. SOUTHWELL |
| 25. BOLCOTE | 26. BURTON JENY |
| 27. GEBLING | 28. NOTHERFIELD |
| 29. CARLTON | 30. ELLESLEY |
| 31. LINCOLN | 32. WILBECK |
| 33. HOLBECK | 34. HULBECK WOODHOUSE |
| 35. BELPH | 36. NORTON |
| 37. LANGWITH | 38. BOUGHTON |
| 39. THORPESBY | 40. PERLETHORPE |
| 41. KIRTON | 42. OLLERTON |
| 43. RUFFORD | 44. WALESBY |
| 45. EDWINSTONE | 46. WORSOP |
| 47. CLIPSTONE | 48. FLEASLEY |
| 49. SUTTON - IN - ASHFIELD | 50. HUCKNALL |
| 51. KIRKBY - IN - ASHFIELD | 52. EAST KIRKBY |
| 53. BLIDWORTH | 54. HAYWOOD OAKS |
| 55. FOUNTAIN DALE | 56. FARNFIELD |
| 57. COTON | 58. CALVERTON |
| 59. ANNESLEY | 60. SEULTON |
| 61. LINBY | 62. NEWSTEAD |
| 63. HUCKNALL TORCROFT | 64. BRAMCOTE |
| 65. CHILWELL | 66. NOTTINGHAM |
| 67. BRINSLEY | 68. EASTWOOD |
| 69. AINSWORTH | 70. CROSSLAND |
| 71. KIMBERLEY | 72. WATNALL |
| 73. NUTHALL | 74. STRELLEY |
| 75. BEESTON | 76. APPLEWICK |
| 77. BESTWOOD | 78. STOKES BARDOLPH |
| 79. WILFORD | 80. W. BRIDGEFORD |
| 81. HOME PIERREPERT | 82. RODCUPPE ON TRENT |
| 83. HAWTON | 84. BALBERTON |
| 85 | 86 |
| 87 | 88 |
| 89 | 90 |
| 91 | 92 |
| 93 | 94 |
| 95 | 96 |



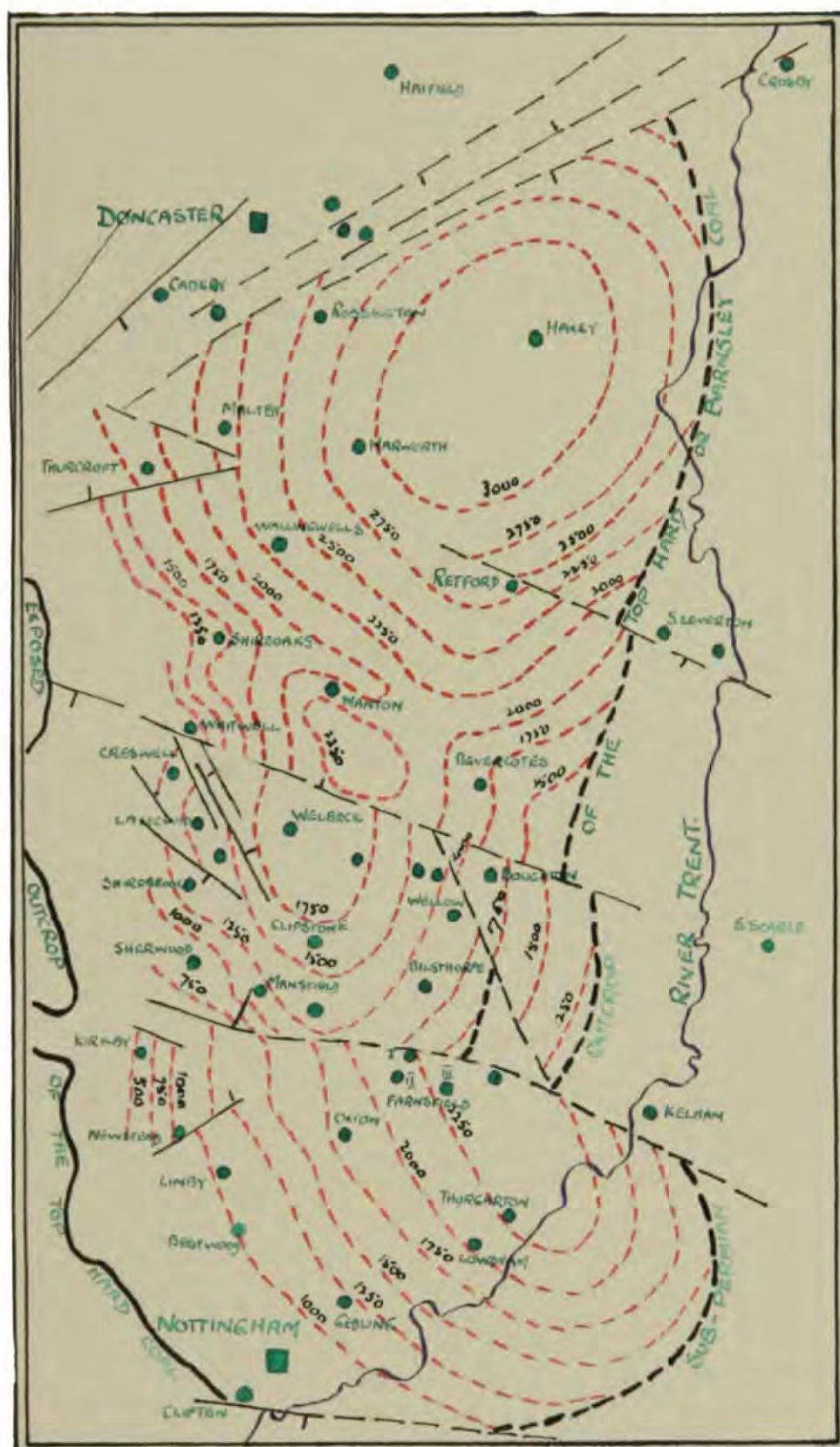
THE BUNTER OUTCROP AS A SOURCE OF WATER

ADAPTED FROM SWINNERTON "NOTTINGHAMSHIRE"



SECTION FROM CHESTERFIELD TO BOUGHTON
SHOWING STRUCTURE OF THE COALFIELD.

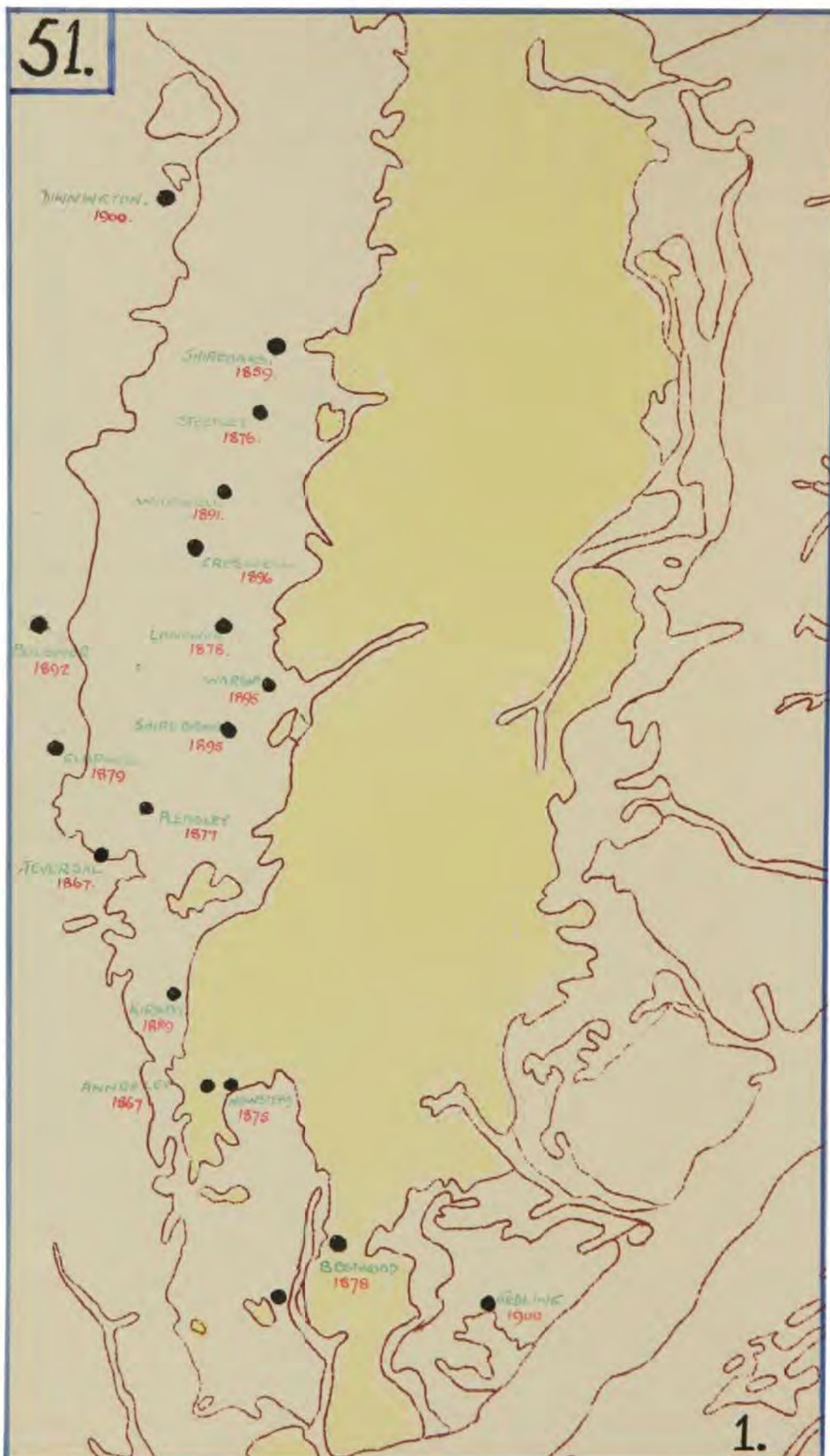
FROM WRAY
 "PENNINES AND ADJACENT
 AREAS"

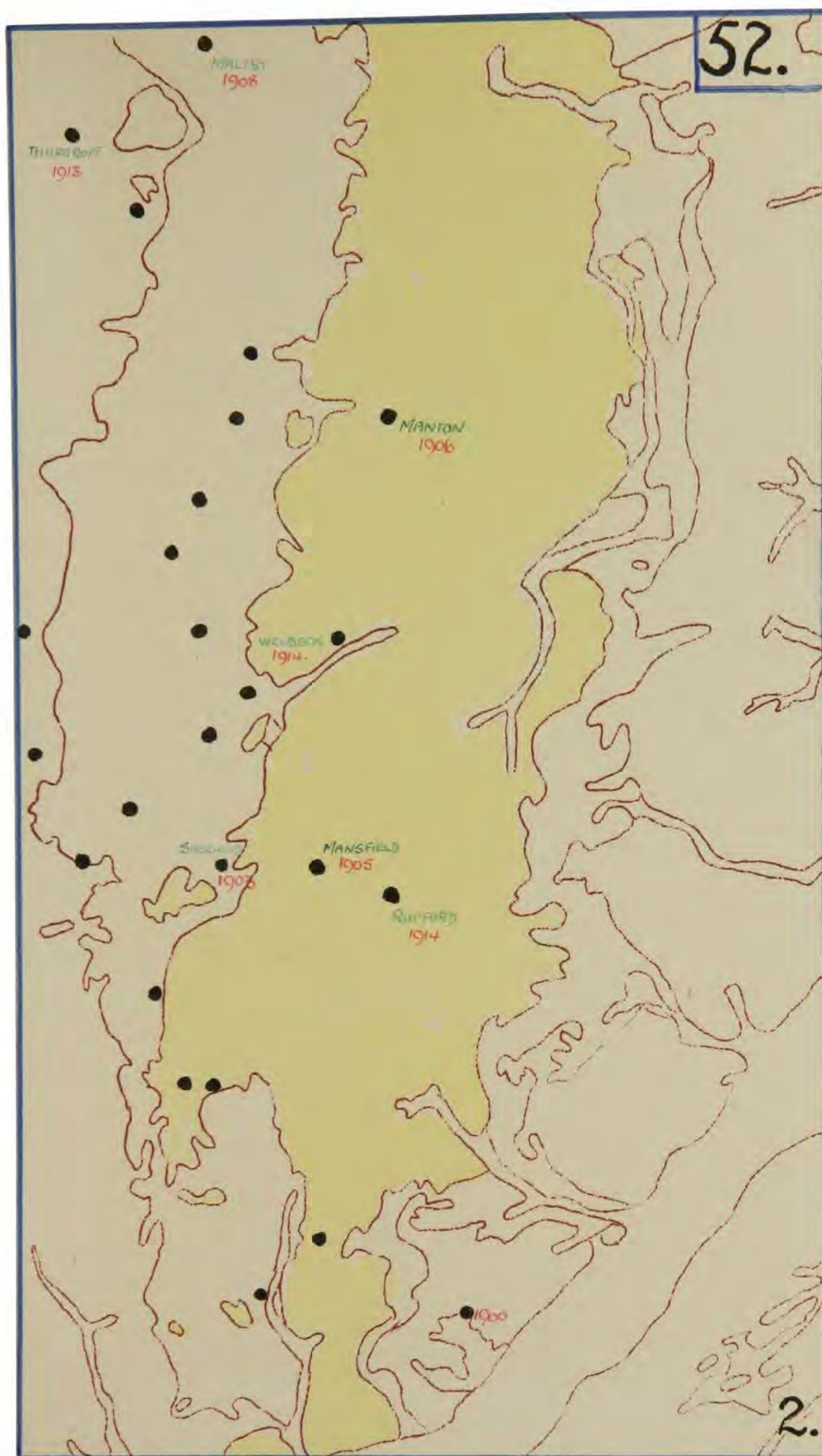


CONJECTURAL CONTOUR LINES IN
TOP HARD OR BARNSELEY COAL
 (DEPTHS IN FT. BELOW SEA LEVEL)

FROM "CONCEALED COALFIELD OF
 YORKS AND NOTTS"
 - WILSON

51.



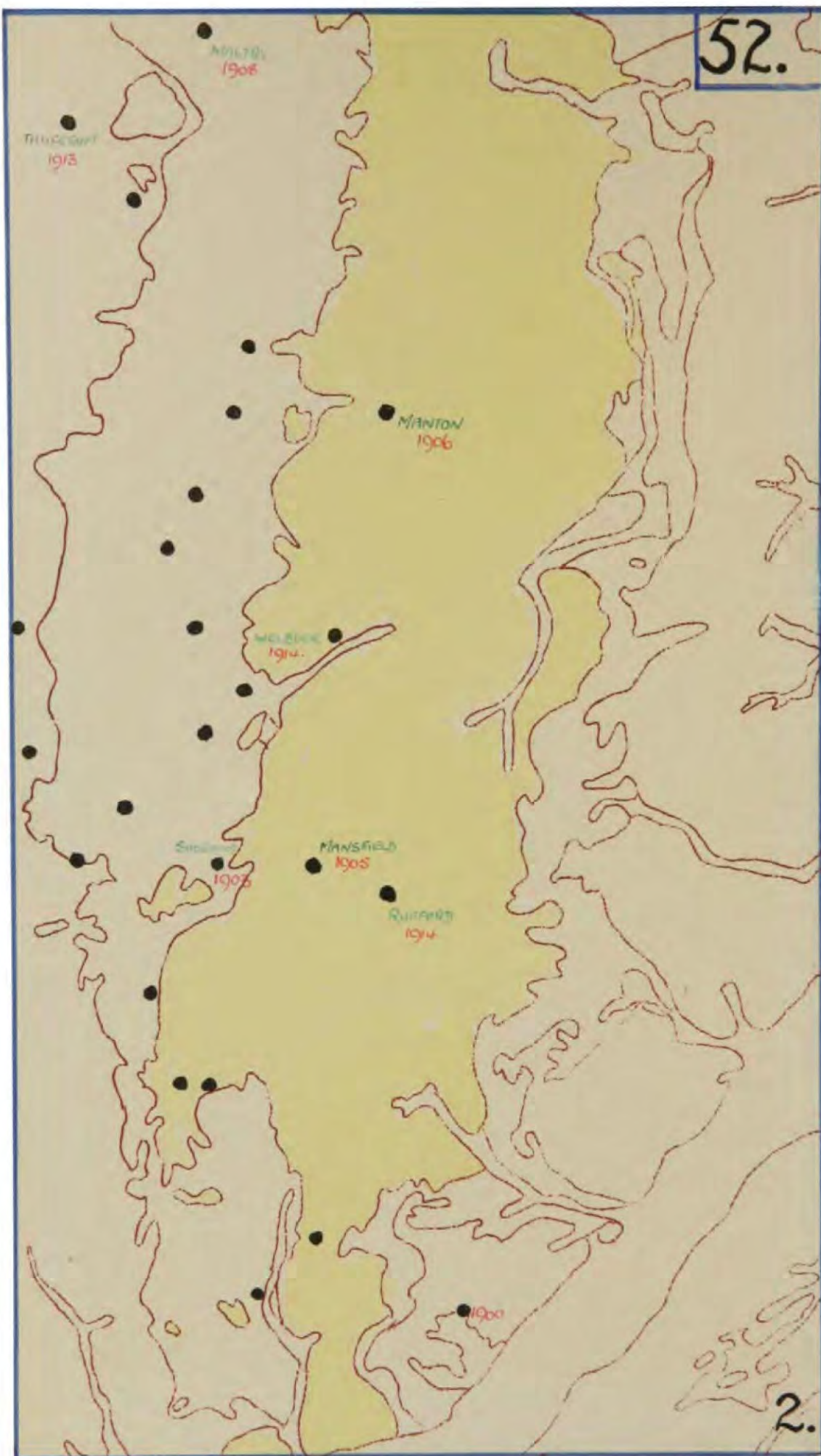


DEVELOPMENT OF THE CONCEALED COALFIELD OF NOTTINGHAMSHIRE.

1. COLLIERIES OPENED 1859-1900.

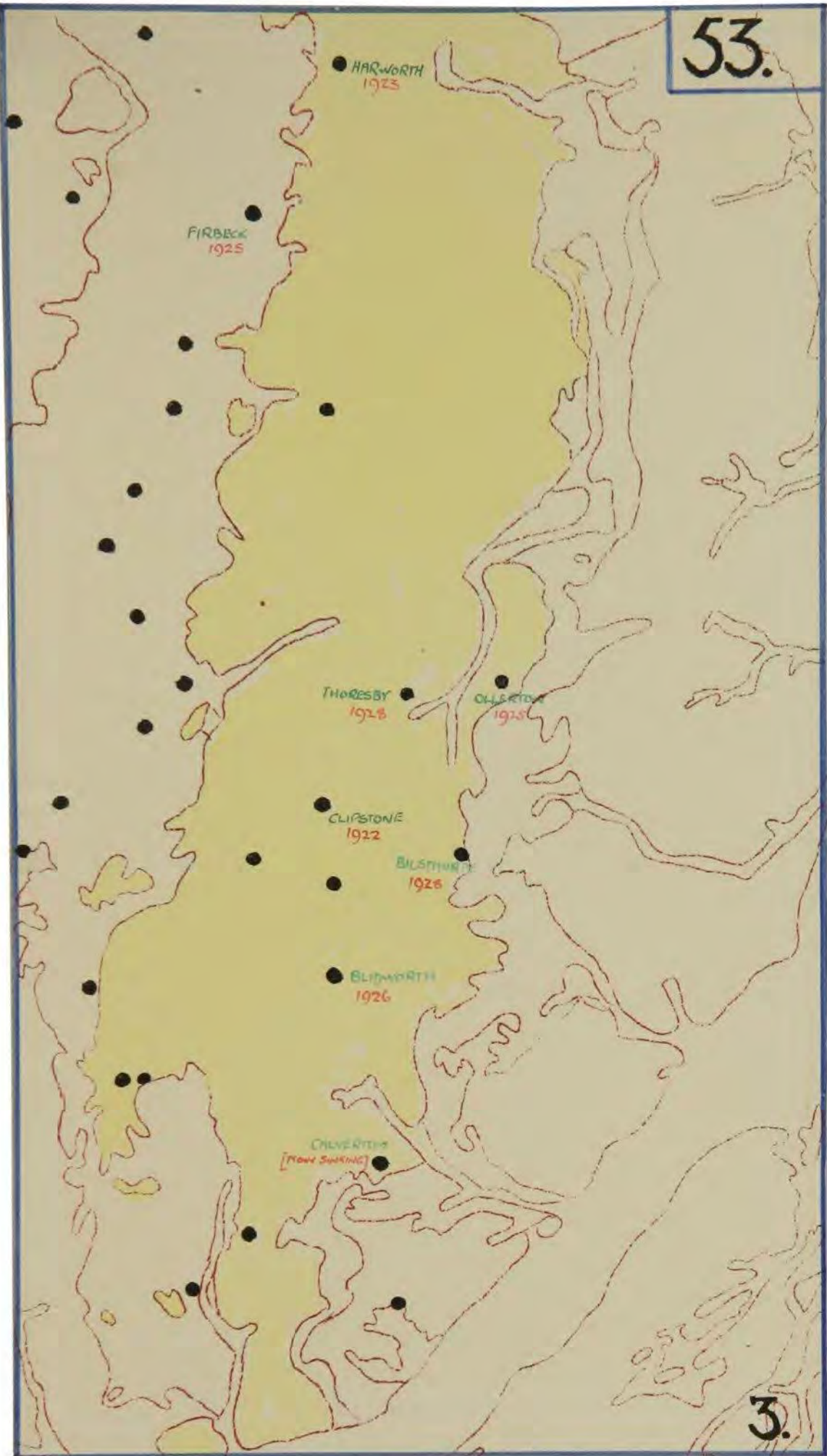
2. " " 1900-1920.

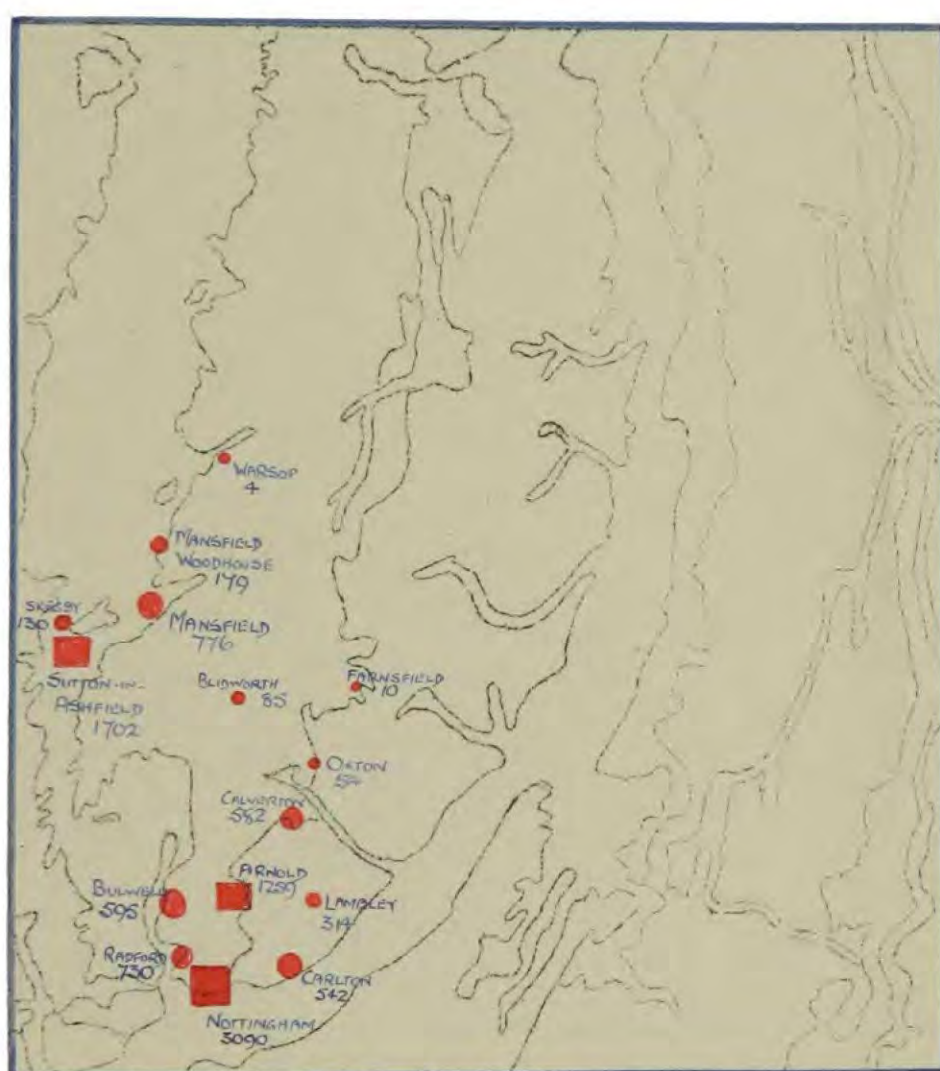
3. " " SINCE 1920.



DEVELOPMENT OF THE CONCEALED
COALFIELD OF NOTTINGHAMSHIRE.

1. COLLIERIES OPENED 1859 - 1900.
2. " " 1900 - 1920.
3. " " SINCE 1920.

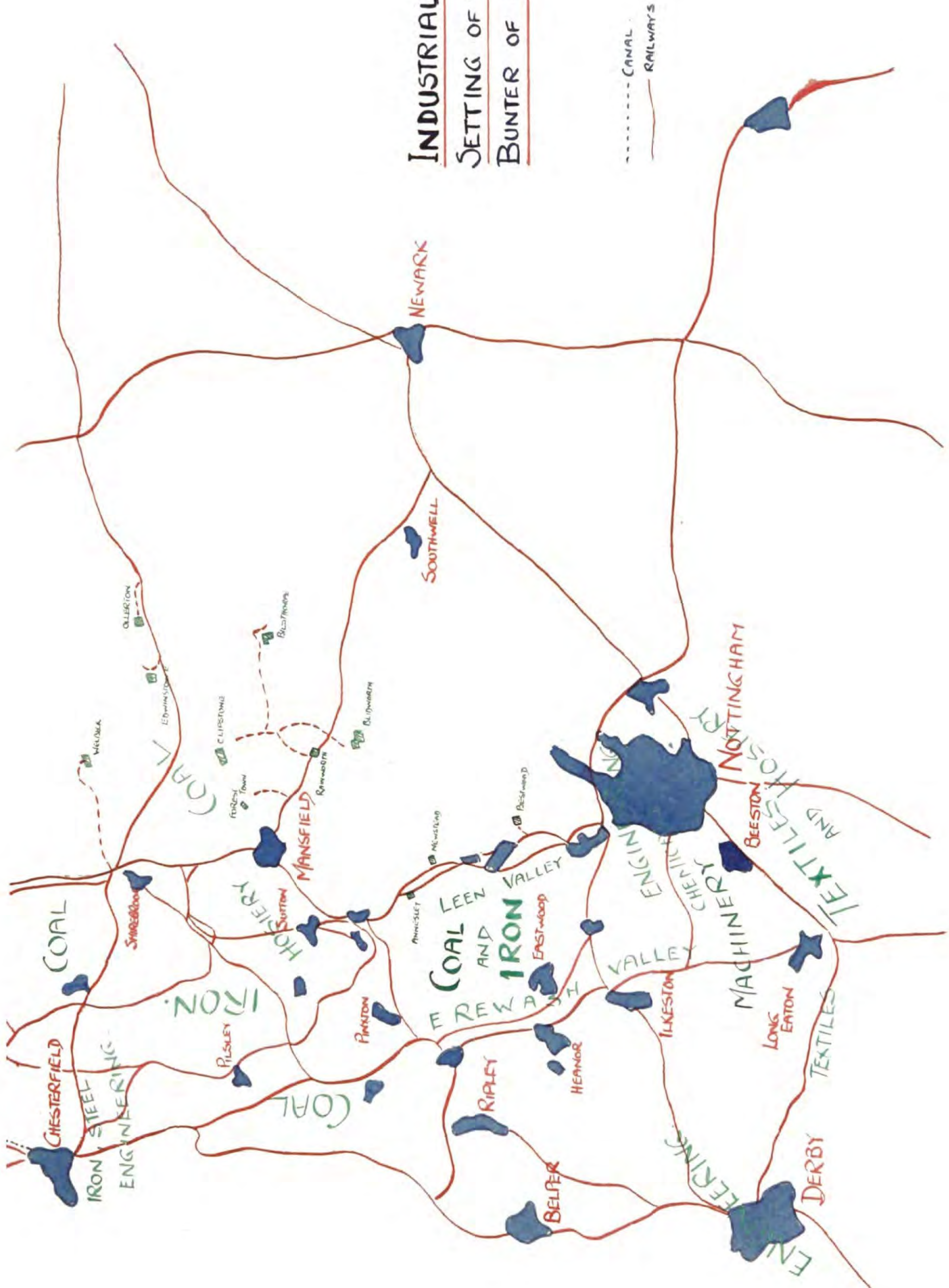


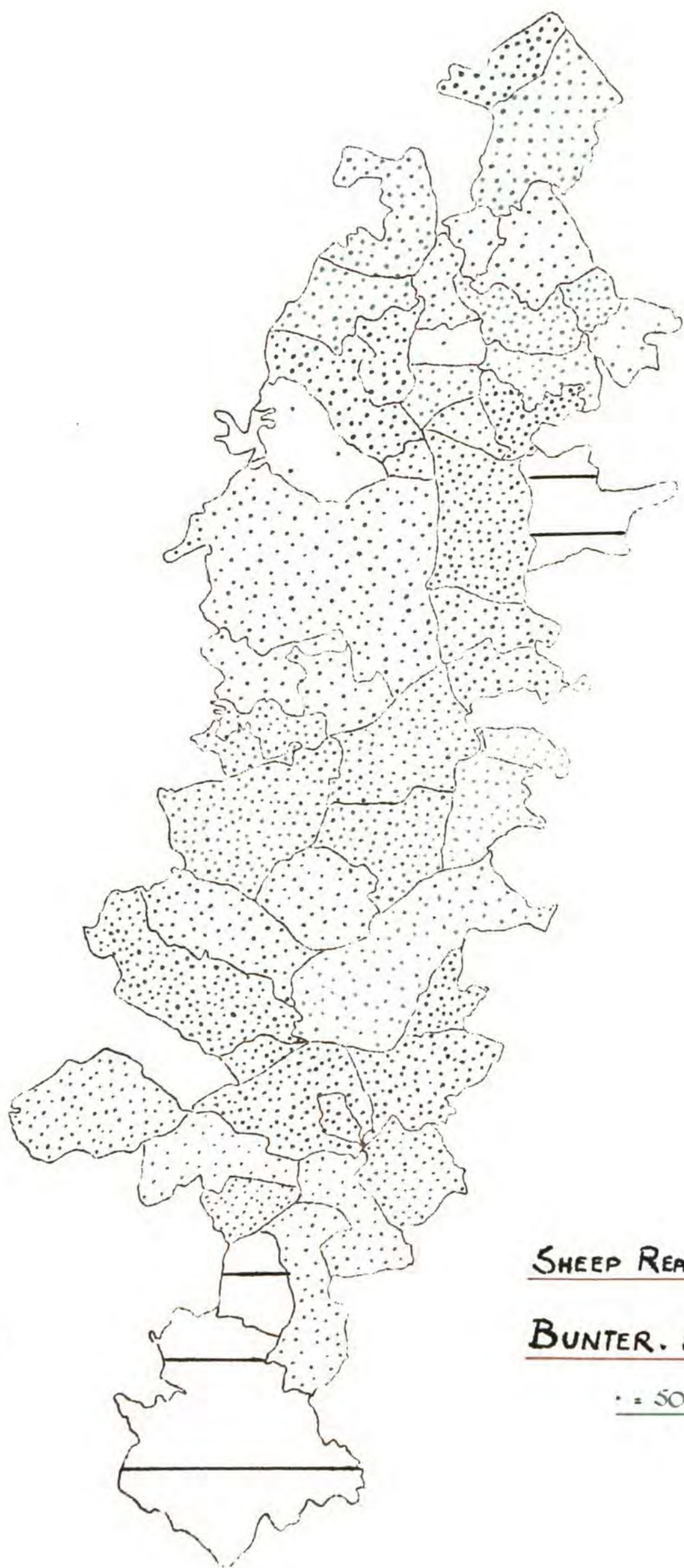


FRAMEWORK CENTRES ON THE
BUNTER OUTCROP. 1845.

FIGURES SHOW NO. OF FRAMES
AT WORK IN TOWNS AND VILLAGES

INDUSTRIAL
SETTING OF THE
BUNTER OF NOTTS.

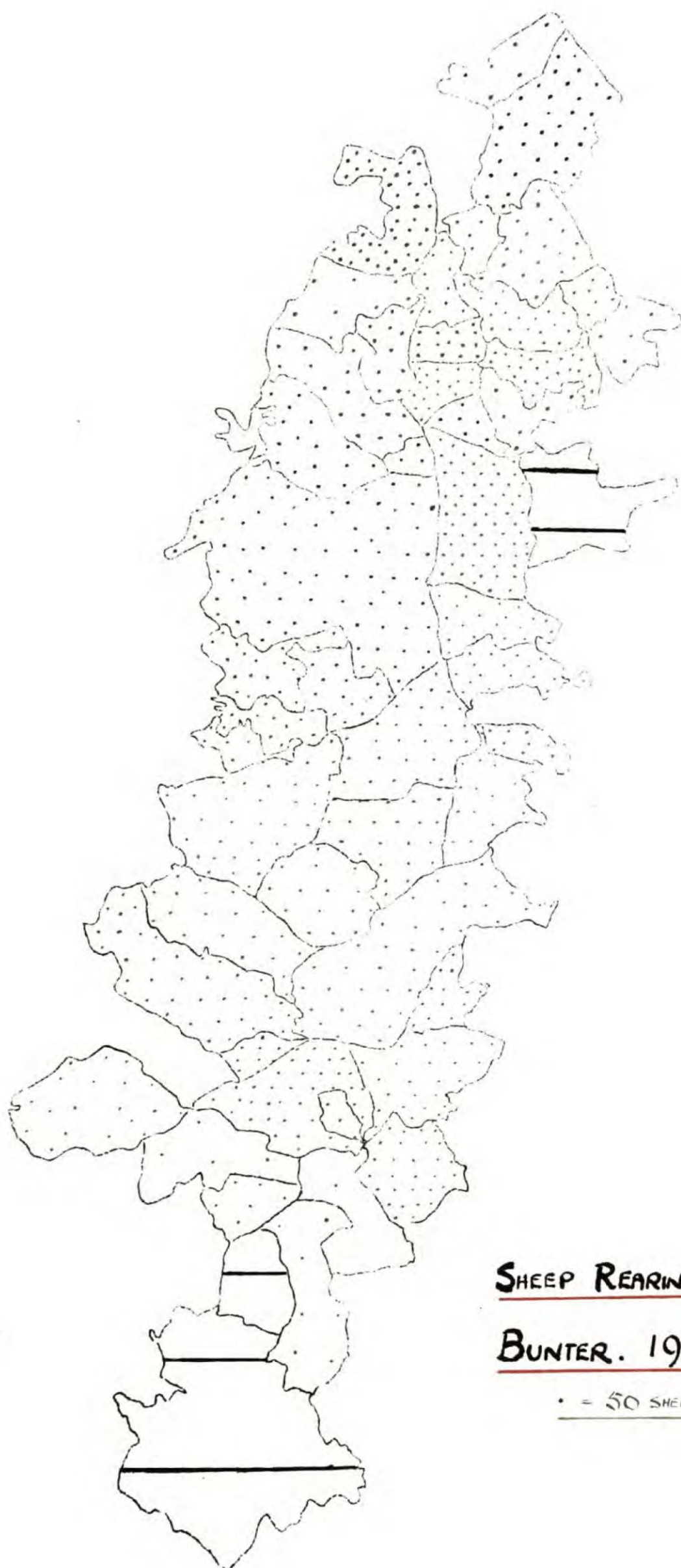




SHEEP REARING ON THE

BUNTER. 1875

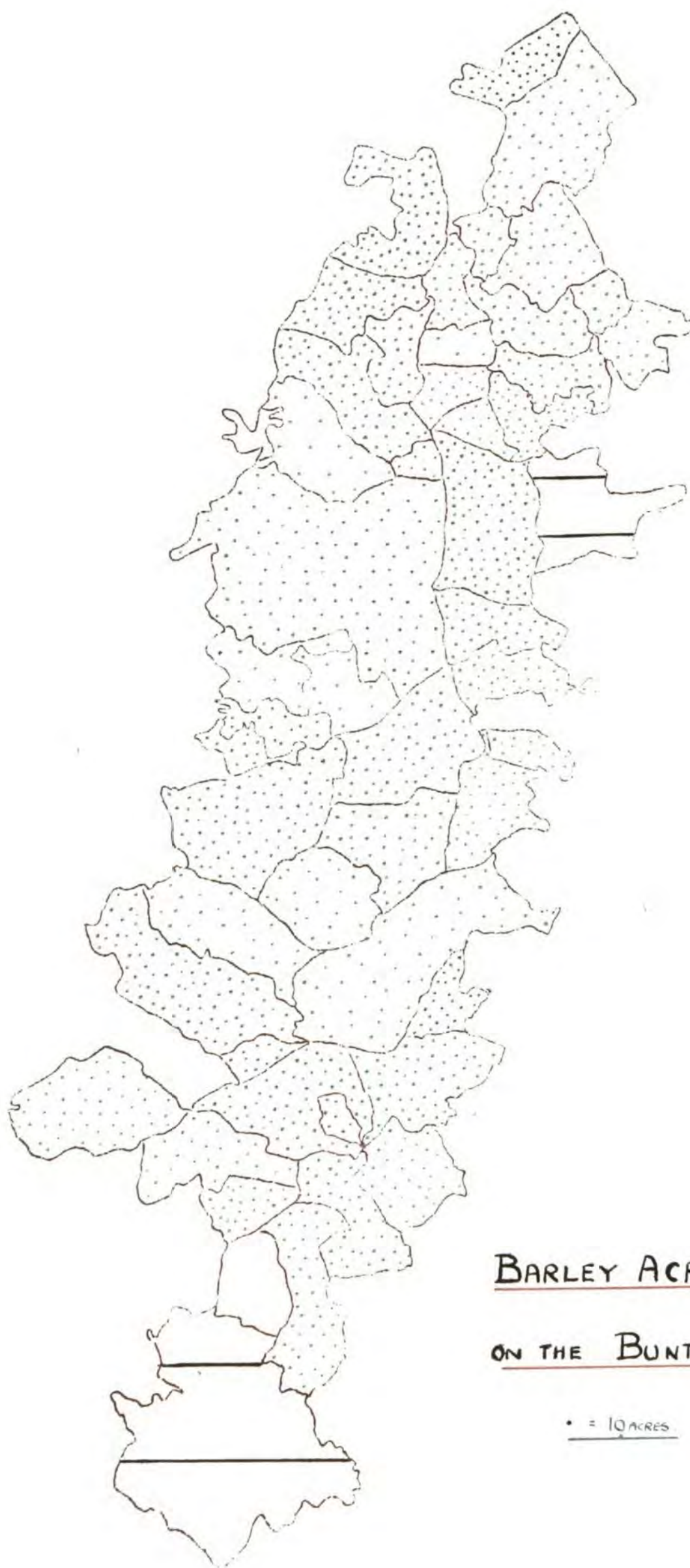
• = 50 SHEEP



SHEEP REARING ON THE

BUNTER. 1937.

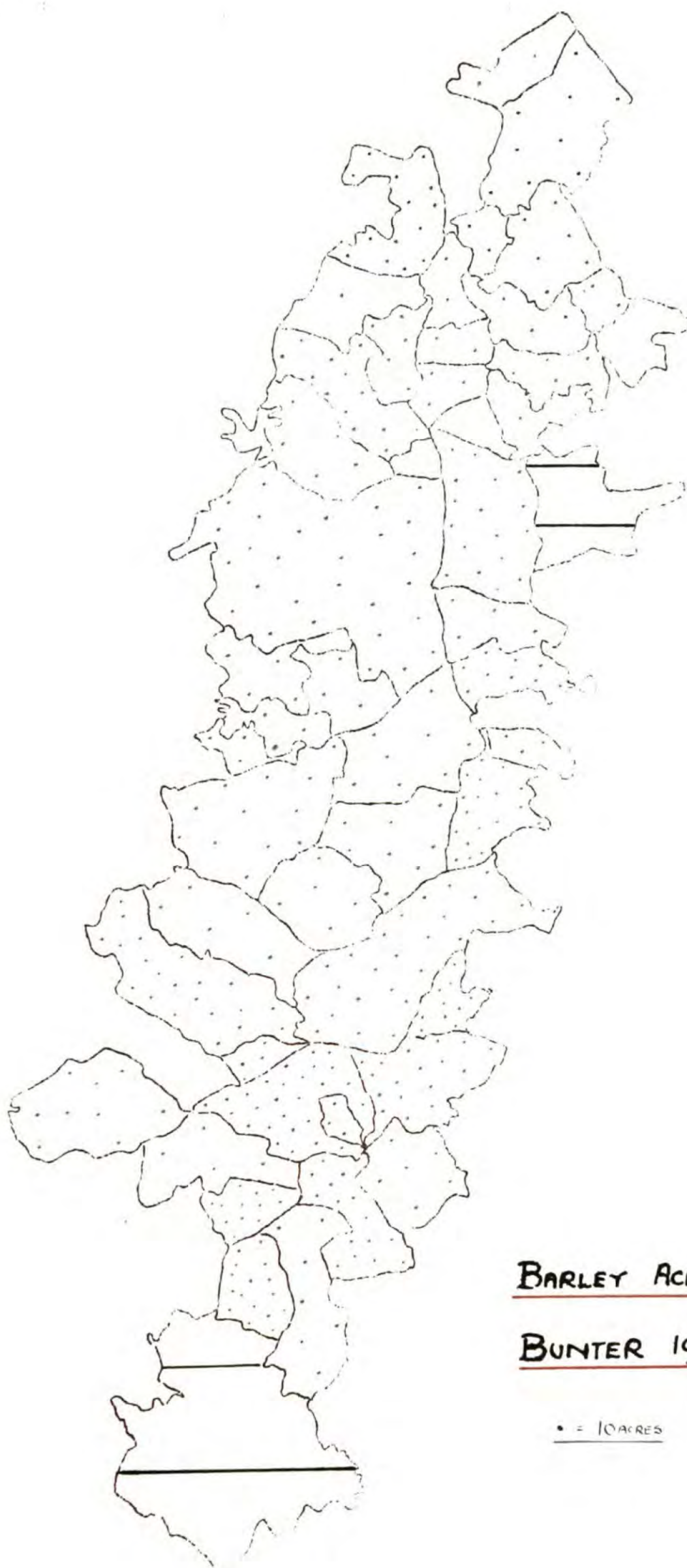
• = 50 SHEEP



BARLEY ACREAGE

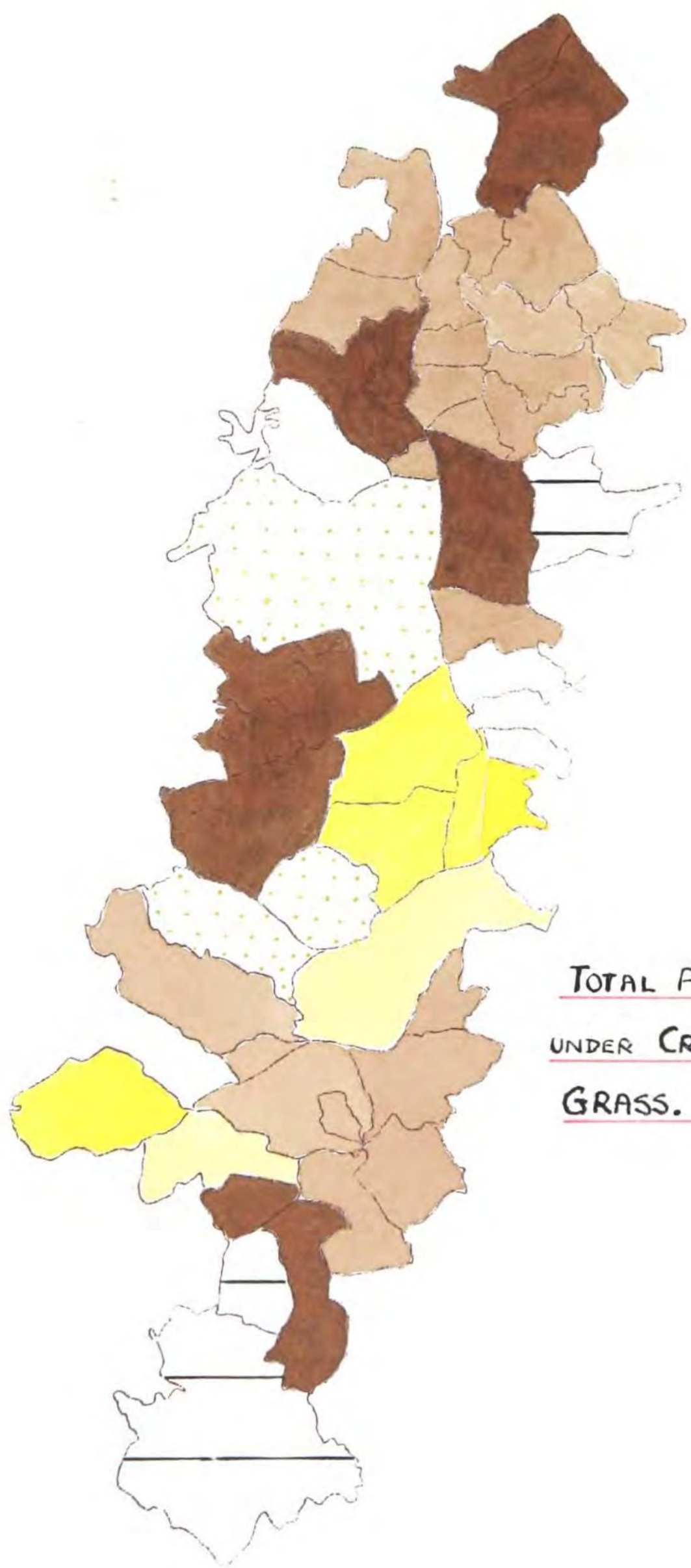
ON THE BUNTER. 1875.

• = 10 ACRES

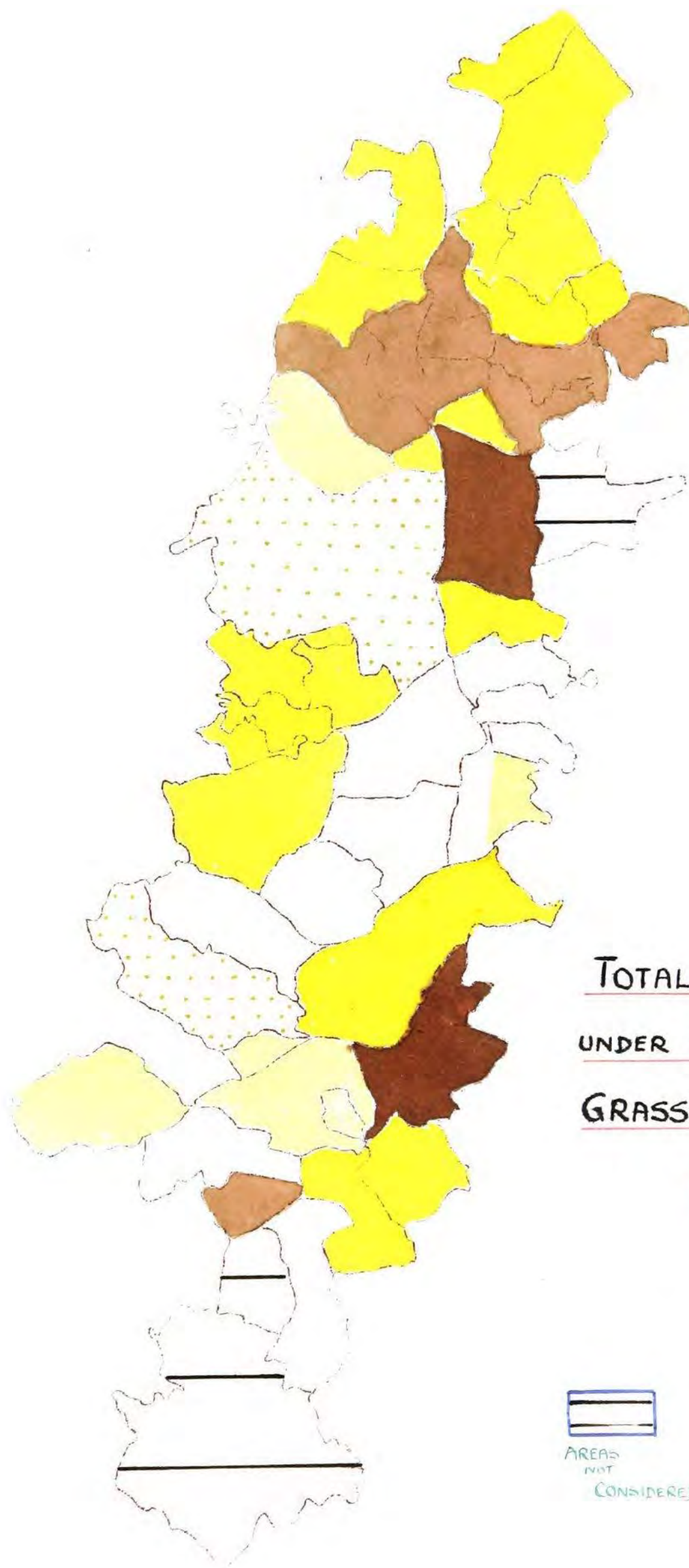


BARLEY ACREAGE ON THE
BUNTER 1937.

• = 10 ACRES



TOTAL ACREAGE
UNDER CROPS AND
GRASS. 1875.



TOTAL ACREAGE
UNDER CROPS AND
GRASS. 1937.

% CULTIVATED.

90%+

80%-90%

70%-80%

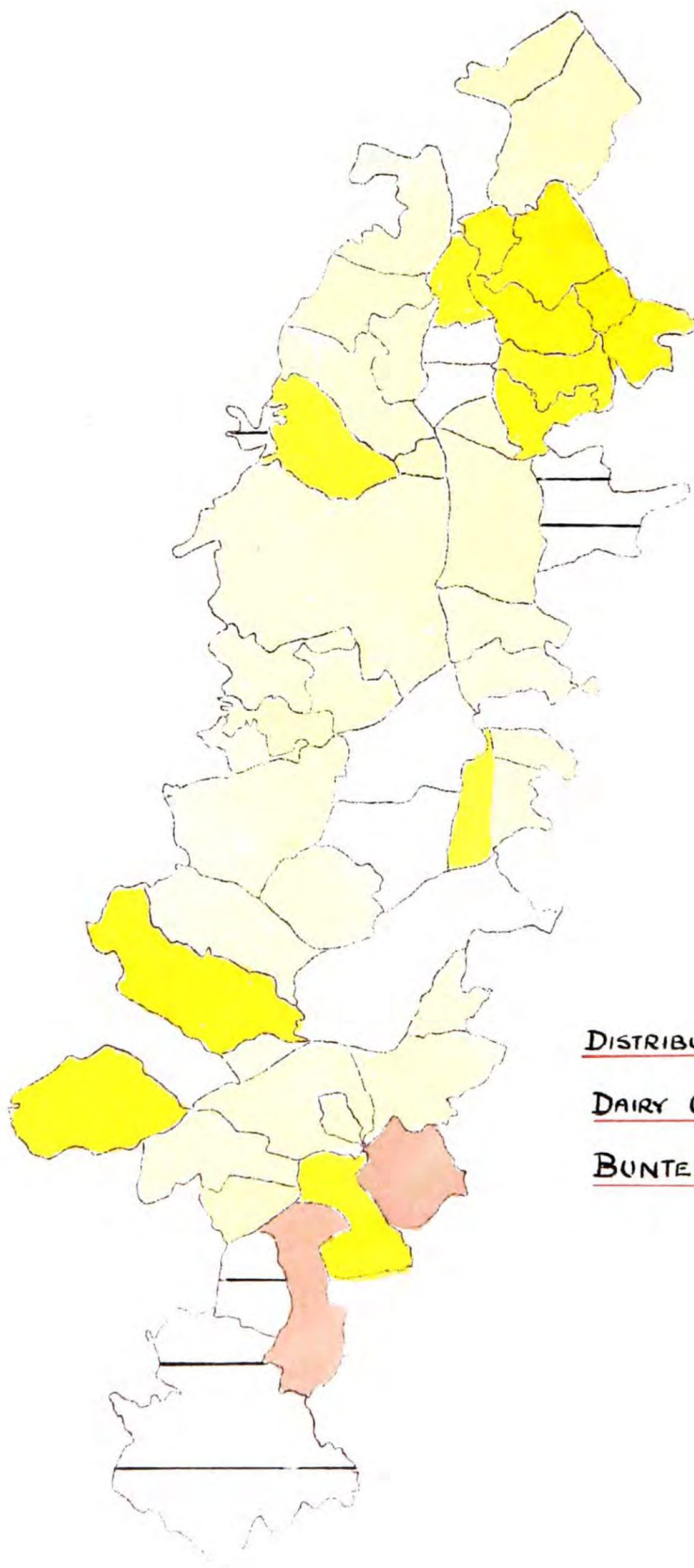
60%-70%

50%-60%

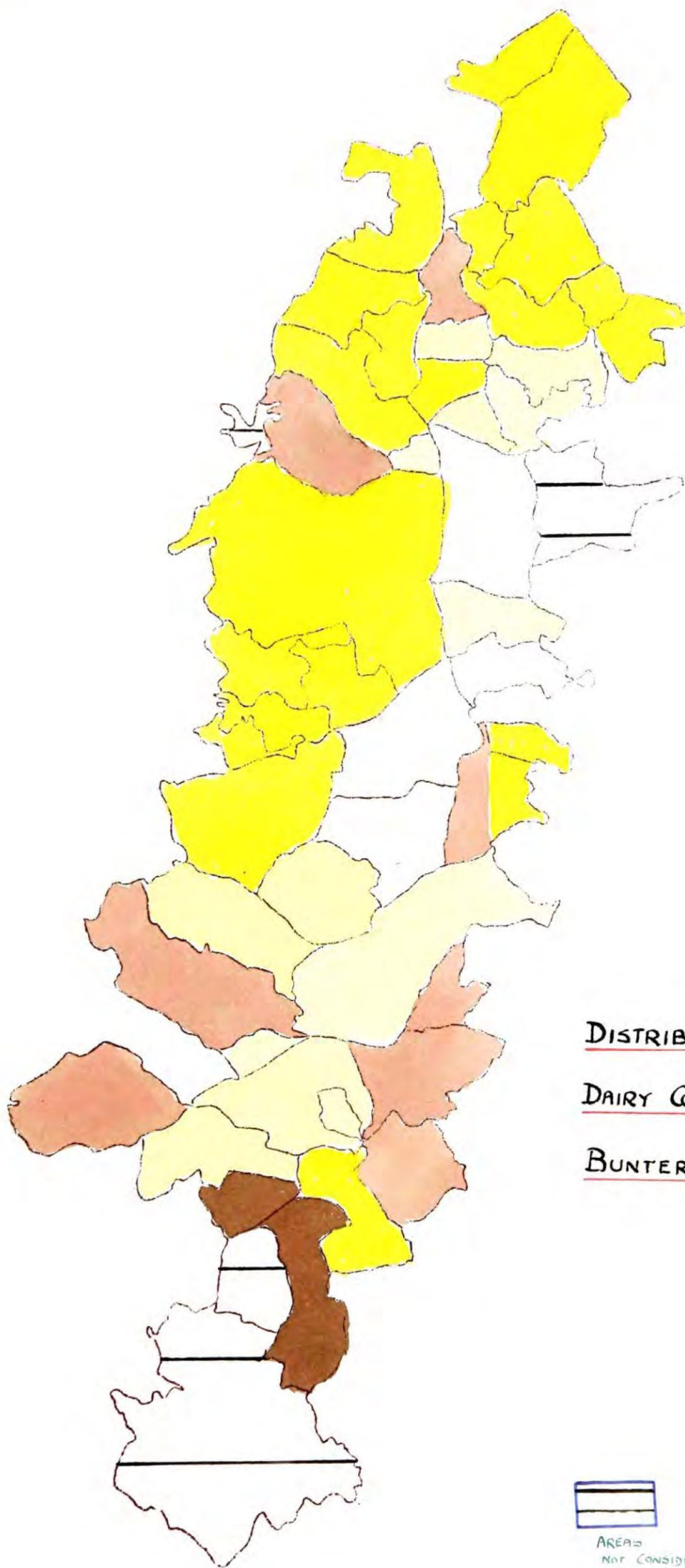
LESS THAN
50%



AREAS
NOT
CONSIDERED.



DISTRIBUTION OF
DAIRY COWS ON THE
BUNTER. 1875.



DISTRIBUTION OF
DAIRY COWS ON THE
BUNTER. 1937.



AREAS
NOT CONSIDERED.

NUMBER
PER SQ. MILE.

OVER 40

30 - 40

20 - 30

10 - 20

LESS THAN 10

