# PROVISIONAL ATLAS

OF THE

# AMPHIBIANS AND REPTILES

# OF THE BRITISH ISLES

Edited by

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## INTRODUCTION

This provisional atlas of the amphibians and reptiles of the British Isles is the first of a series which will cover the smaller groups of animals.

Distribution maps of the British herpetofauna were previously published by Taylor (1948,1963). His pioneer activity laid the foundations for the present work, and his records have been transferred to the data store which is its basis.

Taylor's maps were, however, far from complete, so the Biological Records Centre, in 1966, decided to launch a recording scheme to cover the country as evenly as possible. The majority of post 1960 records on the maps which follow are the result of that scheme, but we have also been able to include data primarily collected for other purposes during the period. From 1968–1971, Dr A S Cooke of Monks Wood Experimental Station coordinated a nationwide survey of the breeding sites of the Common Frog and the Common Toad which yielded much new information; K. Corbett and other members of the British Herpetological Society made detailed studies of the rare species, the Natterjack Toad, Sand Lizard and the Smooth Snake.

The distribution of the rare species is now well known, but for the commoner species the position is less satisfactory though much improved since Taylor's maps were published. Map 1 shows where no recording has been done and records are still needed from these areas. Any record that fills in a gap on one of the maps will be gratefully received by the BRC and the following brief notes are included as an aid to the identification of the species.

## NOTES ON THE IDENTIFICATION OF SPECIES

There are twelve indigenous species of amphibians and reptiles on the mainland of Britain: three newts, two toads, one frog, three lizards and three snakes. Several alien species have been introduced, and two, the Marsh Frog and the Edible Frog, are now established and maps showing their distribution are included.

All the amphibians breed in water and have aquatic larvae (tadpoles). The adults rarely venture far from water and when they do they tend to remain in moist habitats.

The reptiles breed on land, either by laying eggs, or by giving birth to live young, and in general occupy a much greater variety of habitats ranging from upland moors to coastal plains.

While the majority of reptiles and amphibians are widespread and often locally common, three species (the Natterjack Toad, the Sand Lizard and the Smooth Snake) are now uncommon and restricted to certain limited localities and will require strong conservation measures if they are to survive in Britain. For this reason, those who know the precise localities of these species are urged not to disclose them to others as the information could fall into the hands of unscrupulous collectors with unfortunate results for the species.

### Description.

### The Amphibians

1. The Warty or Great Crested Newt *(Triturus cristatus* (Laurenti)), the Smooth Newt *(T. vulgaris* (L.)) and the Palmate Newt *(T. helveticus* (Razoumowski)).

The Warty Newt is the largest European newt with a total length of up to 162mm. for the female, the male usually being smaller. The skin is soft and warty, brown above and orange spotted black below. During the breeding season the males develop a high denticulated crest along the back and tail. The Smooth Newt is not dissimilar to the Warty Newt, but is smaller (about 70–80mm), the warts are absent and the males' crest is much less developed. The Palmate Newt is the smallest European species, typically 60–80mm. Its skin is smooth and the tail ends in a small thread. During the breeding season males develop black webbing between the toes and a low unbroken crest.

2. The Natterjack Toad *(Bufo calamita* Laurenti) and the Common Toad *(Bufo bufo* (L.))

The noticeable rough, warty and rather dry skin of the toads distinguishes them from the frogs. The Natterjack is the smaller (up to 75mm) and in Britain possesses a diagnostic yellow median line down the back. It never jumps, but runs and crawls. The Common Toad grows up to 95mm and is usually greyish on the upper parts with blackish warts. It usually crawls, but with intermittent clumsy jumps.

3. The Common Frog *(Rana temporaria* L.), the Edible Frog *(R. esculenta* L.) and the Marsh Frog *(R. ridibunda* Pallas).

The Marsh Frog, which was introduced into Kent in 1935, is the largest of the three, typically 80–84mm but may exceed 100mm. It has a longer snout and hind limbs than the Edible Frog and although very variable is usually light or dark brown with or without black spots. The Edible Frog, probably first introduced into Norfolk in 1837, is about the same size as the Common Frog (60–80mm) but has a narrower head (the space between the eyes being only half the width of the eyes, compared to a distance equal to their width in the Common Frog). They are usually greener and less brown than the Common Frog.

### The Reptiles

4. The Slow Worm *(Anguis fragilis* L.) the Common Lizard *(Lacerta vivipara* Jacquin) and the Sand Lizard *(L. agilis* L.).

The Slow Worm is a legless lizard, resembling a small snake. It is about 300mm in length and the extreme smoothness of the scales gives it a highly polished appearance. The adult Sand Lizard can be separated from the Common Lizard by its larger size (190–220mm compared to 150–180mm), and by its bolder markings which include 'Arabic writing', black and white spots, and in the males the bright yellow-green on the flanks. Immature specimens can be difficult to distinguish from Common Lizards and identification may have to be confirmed by the scalation of the head and vent.

5. The Grass Snake (*Natrix natrix* (L.)), the Smooth Snake *(Coronella austriaca* Laurenti) and the Viper or Adder (*Vipera berus* (L.)).

The Grass Snake, our largest snake, typically 1000–15000mm in length, is associated with water or damp habitats. It is olive-brown or green with black spots and is at once distinguished by the distinct yellow, white or orange collar behind the head. The Viper, our only venemous reptile, is typically 450–550mm in length. Its colouration is varied but it can almost invariably be identified by the dark zig-zag line down the middle of the back and the dark markings on the flanks. The Smooth Snake is intermediate in size between the other two species, but is slimmer in appearance than the Viper. It is generally brownish-khaki with dark brown markings and derives its name from the absence of a central keel to the dorsal scales.

***ACKNOWLEDGEMENTS***

We would like to thank the hundreds of naturalists, of many diverse disciplines, who contributed and the large number of members of the public who helped by writing in. We are particularly grateful to the schoolchildren of Ireland: those in Northern Ireland who made a special survey of the Common Frog organised by the Education Department in connection with National Nature Week in 1963: and those in the Republic who recorded the Common Frog, Common Lizard and Smooth Newt at the behest of An Foras Forbartha Teoranta during European Conservation Year, 1970.

We are also most grateful to Col. Taylor, Dr Cooke and the British Herpetological Society for the data they so generously made available to us, and to the members of the last named for providing the notes on the identification of the species.

**REFERENCES**

Taylor, R.H.R. 1948. The distribution of reptiles and amphibia in the British Isles with notes on species recently introduced. **Brit. J. Herpet.**, 1.1–38.

Taylor, R.H.R. 1963. The distribution of amphibians and reptiles in England and Wales, Scotland and Ireland and the Channel Isles: a revised survey. **Brit. J. Herpet.**, 3, 95–115.

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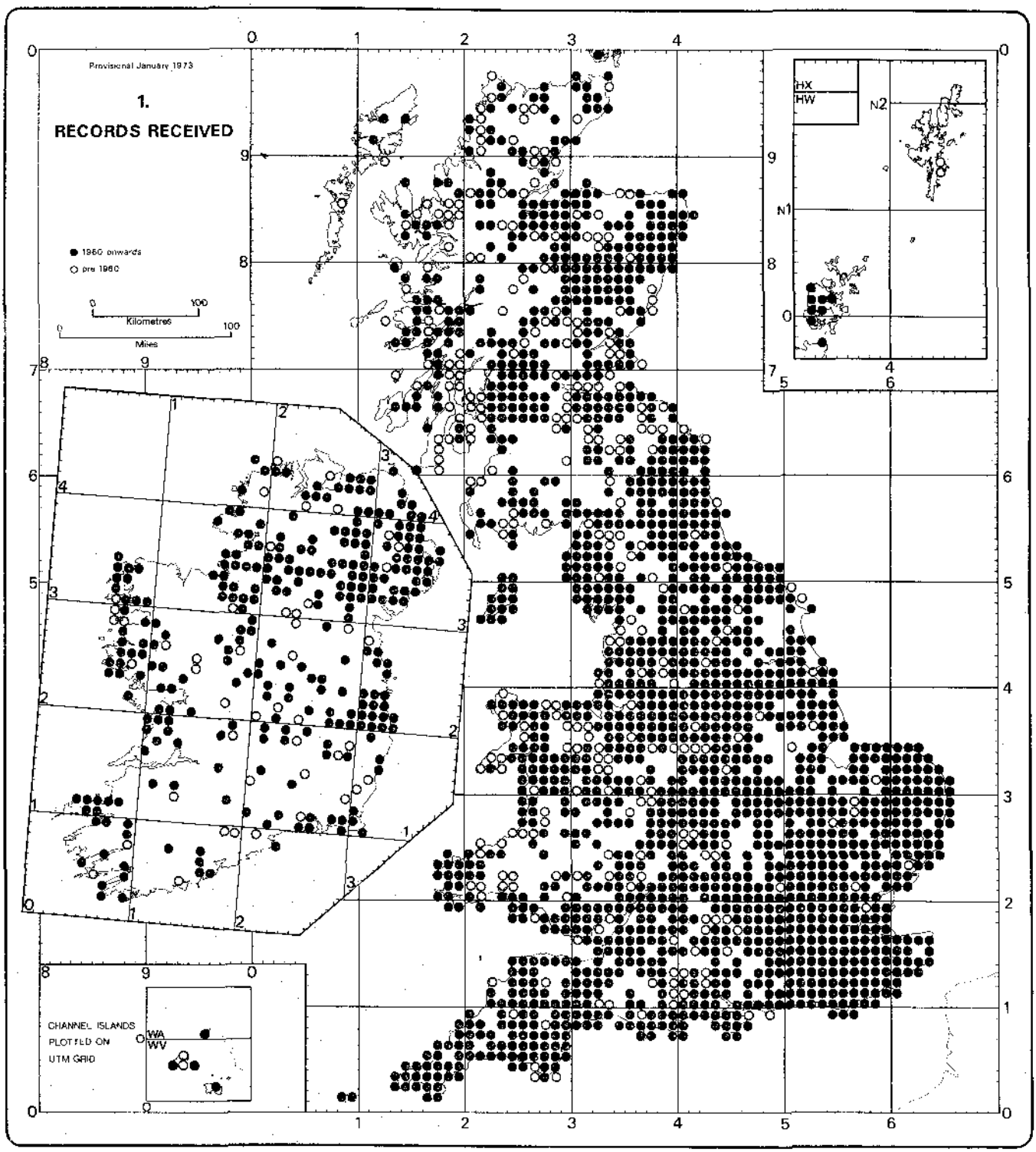
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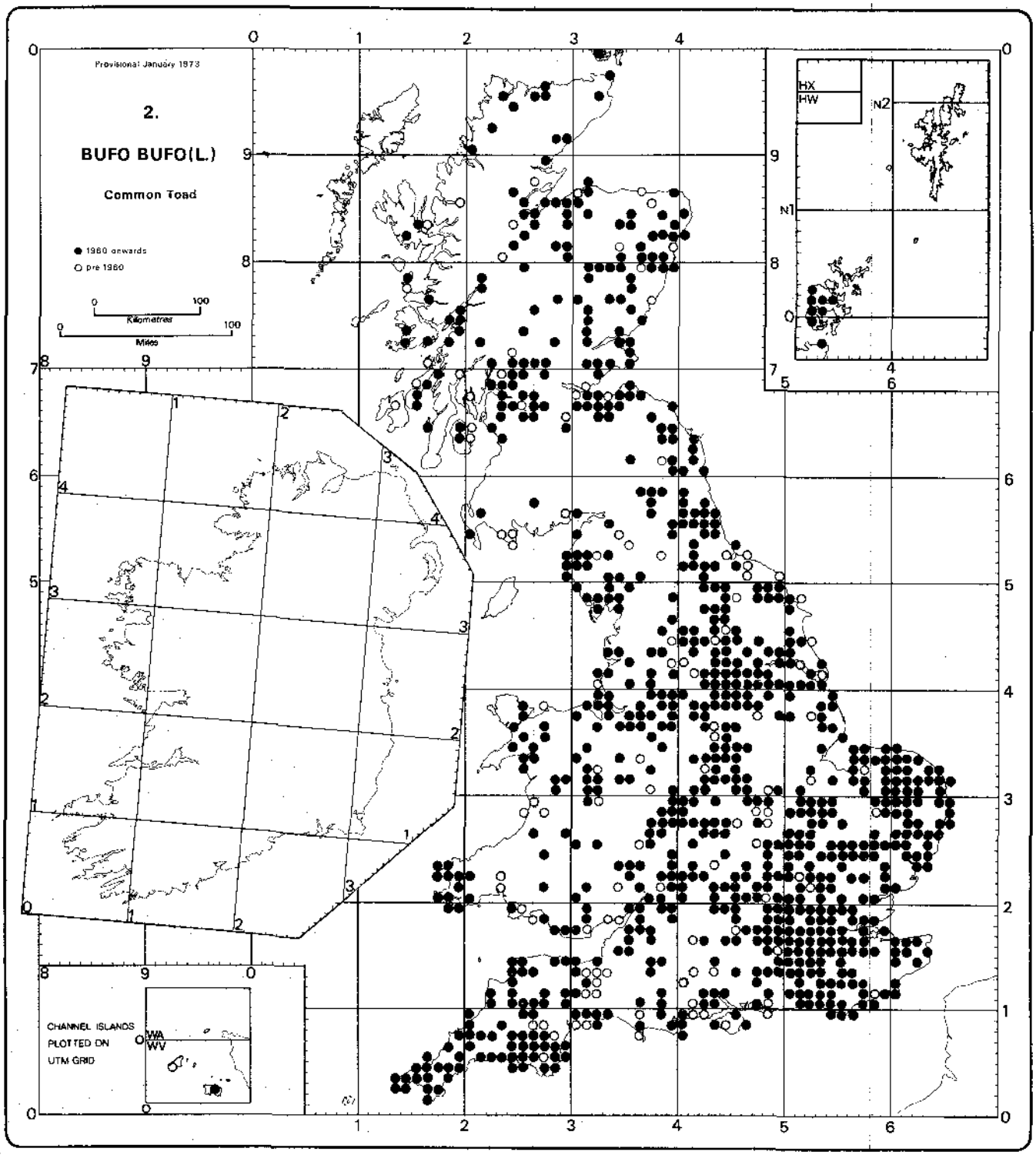
1.
RECORDS RECEIVED
1960 onwards
pre 1960
Kilometres
Miles
HX
HW
N2
N1
CHANNEL ISLANDS
PLOTTED ON
UTM GRID
WA
WV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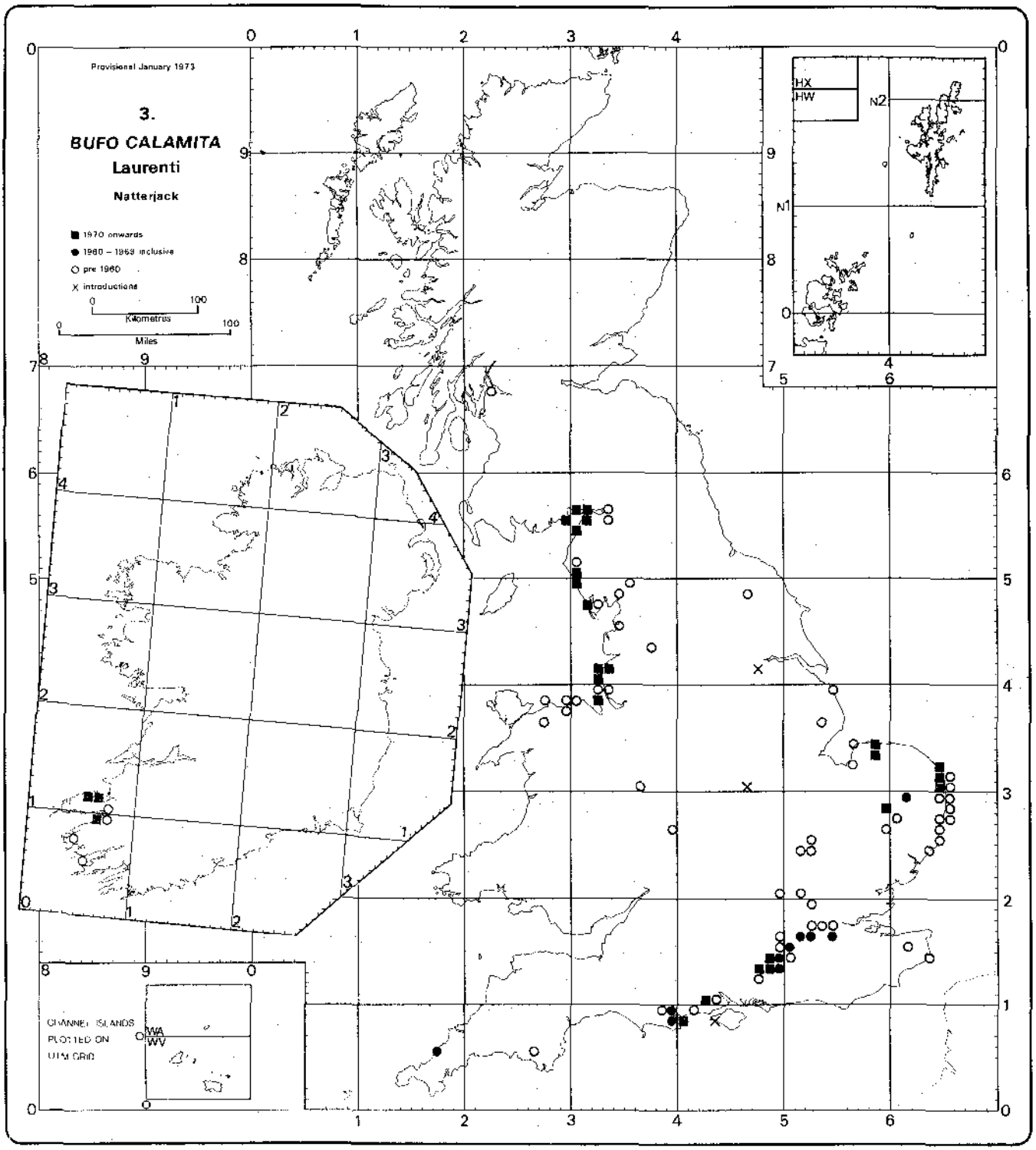
BUFO BUFO(L.)
Common Toad
1980 onwards
pre 1980
0 100
Kilometres
0 100
Miles
HX
HW
N2
N1
CHANNEL ISLANDS
PLOTTED ON
UTM GRID
WA
WV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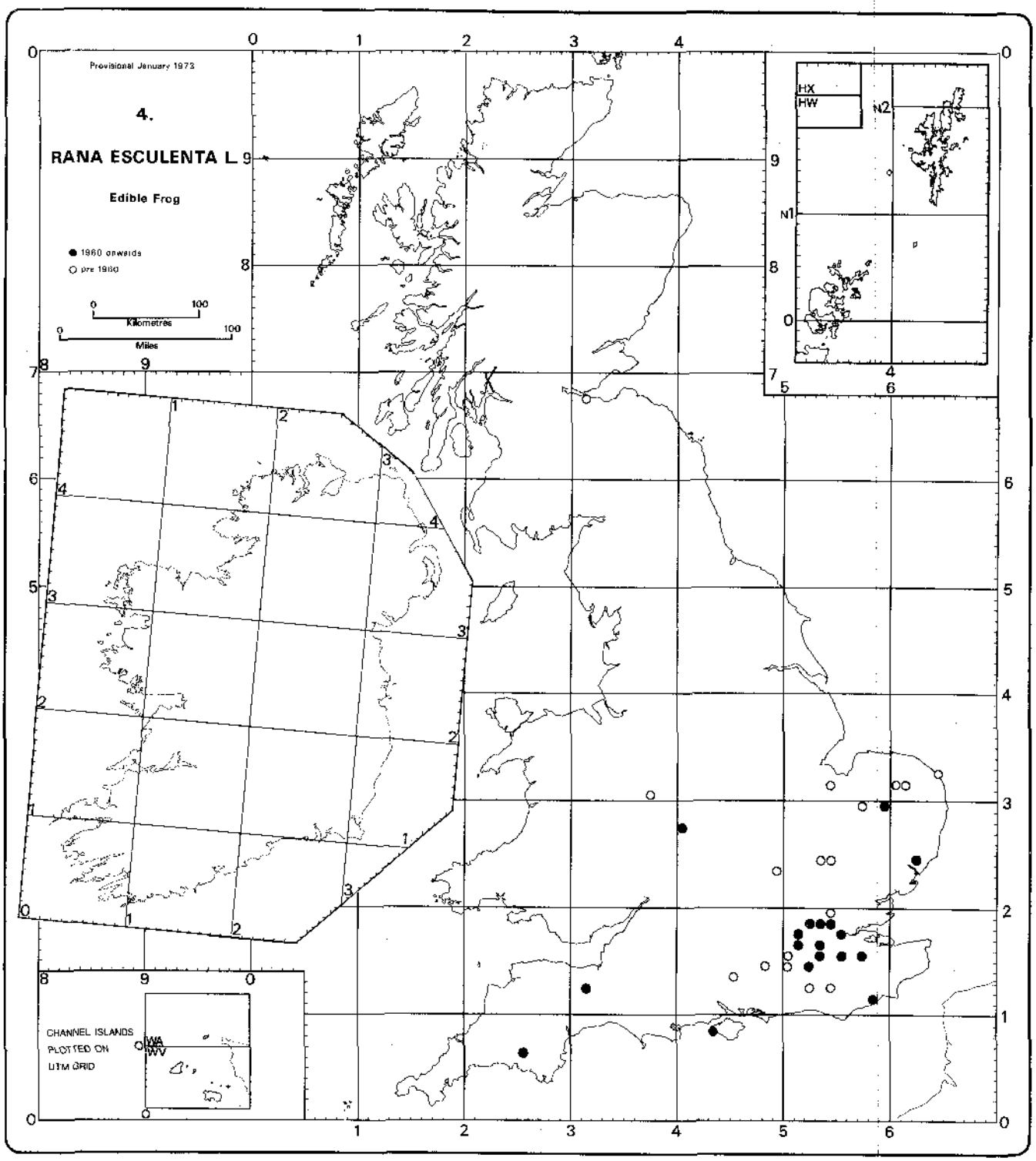
BUFO CALAMITA
Laurenti
Natterjack
1970 onwards
1960 – 1969 inclusive
pre 1960
introductions
0 100
Kilometres
0 100
Miles
HX
HW
N2
N1
CHANNEL ISLANDS
PLOTTED ON
UTM GRID
WA
WV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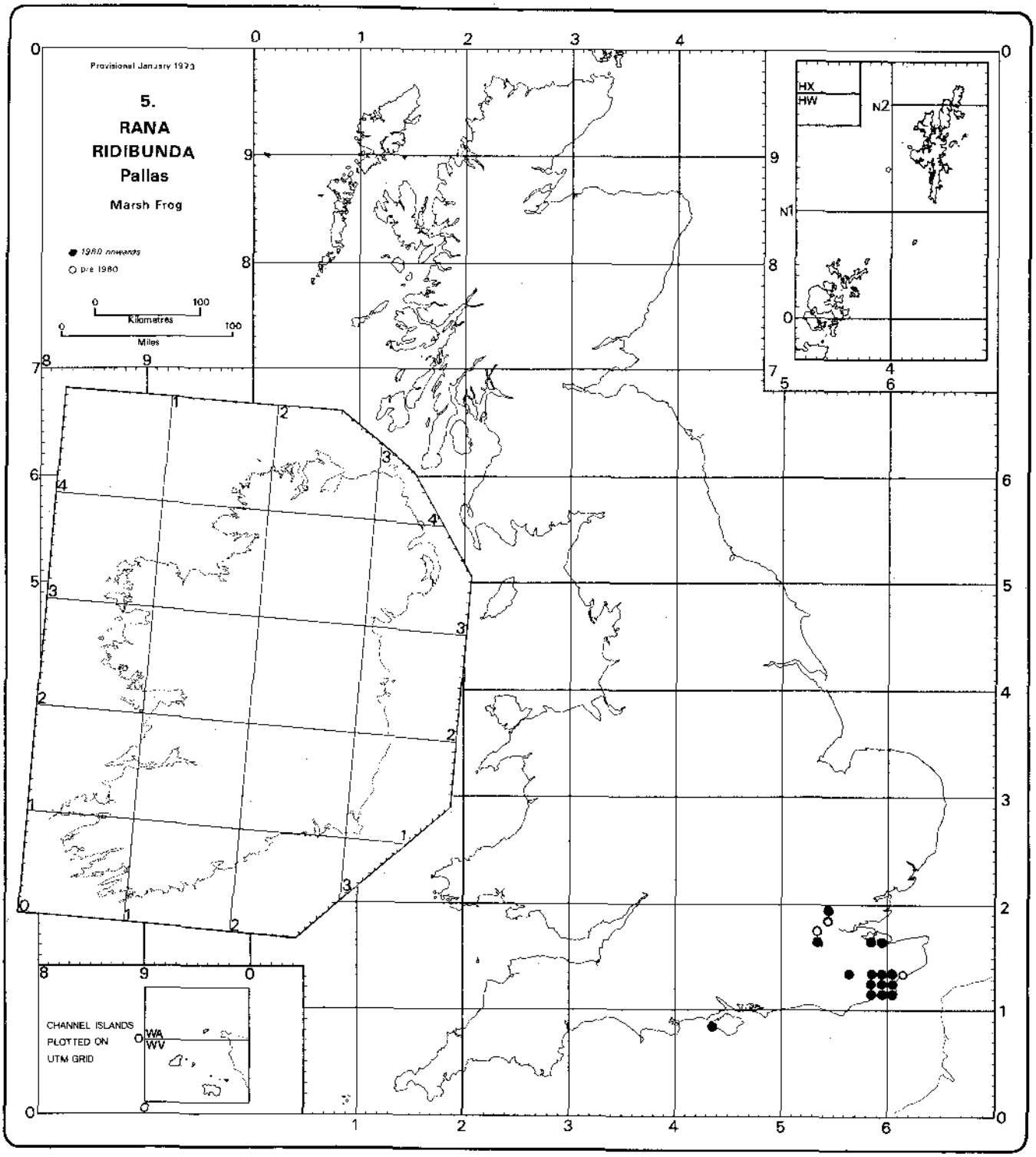
RANA ESCULENTA L.
Edible Frog
● 1960 onwards
○ pre 1960
0 100
Kilometres
0 100
Miles
HX
HW
N2
N1
CHANNEL ISLANDS
PLOTTED ON
UTM GRID
WA
WV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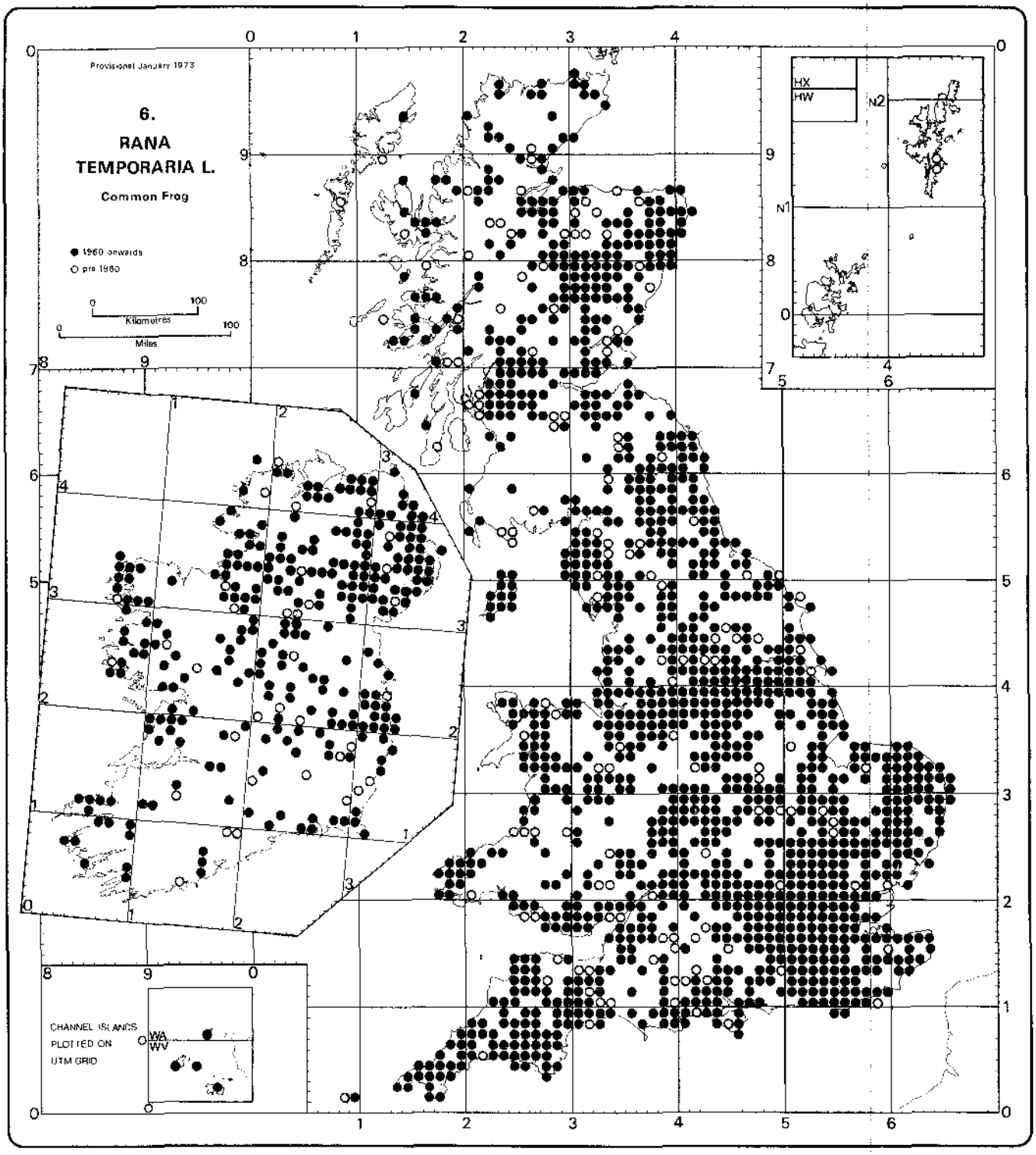
RANA
RIDIBUNDA
Pallas
Marsh Frog
1980 onwards
pre 1980
0 100
Kilometres
0 100
Miles
HX
HW
N2
N1
CHANNEL ISLANDS
PLOTTED ON
UTM GRID
WA
WV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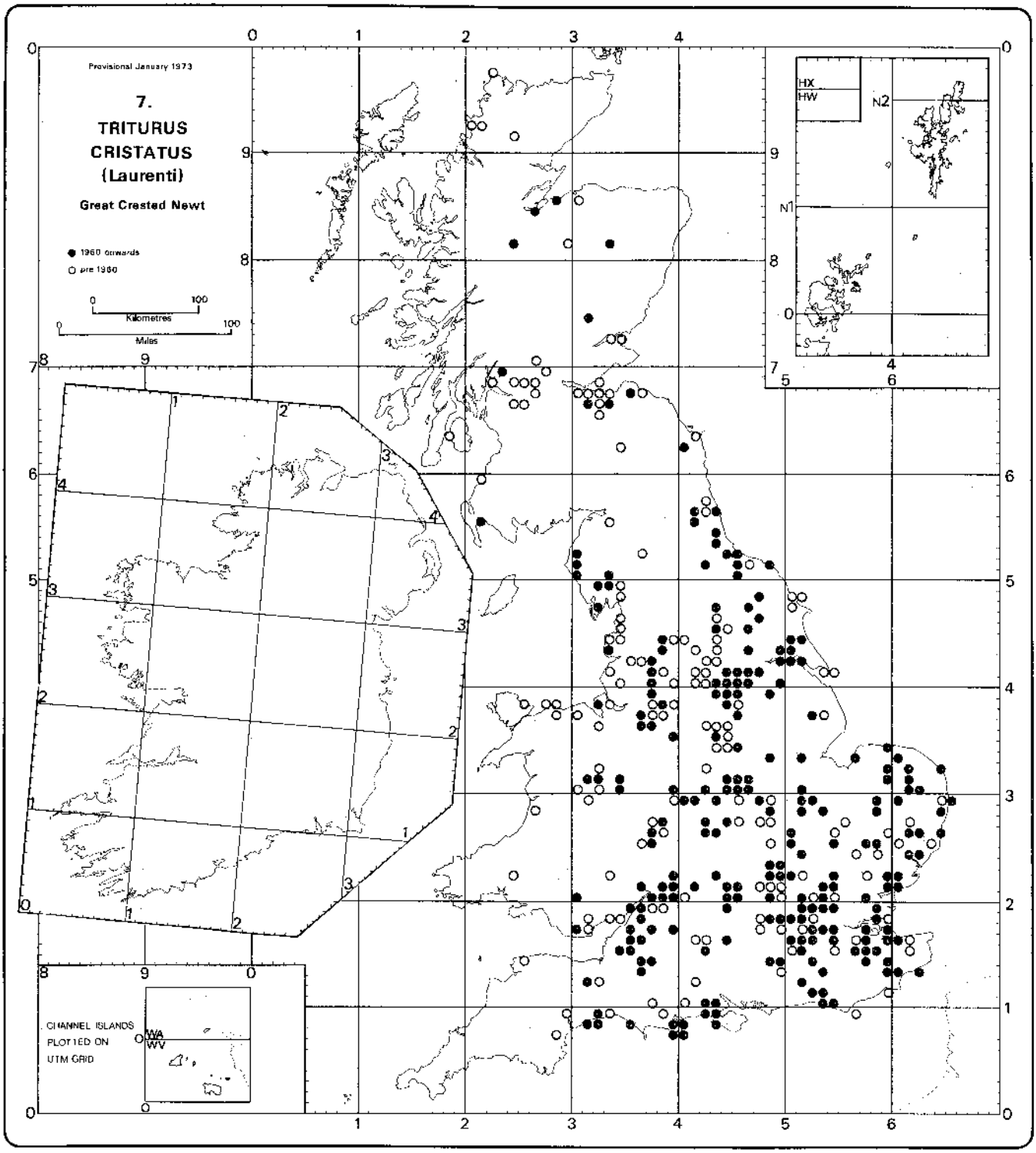
TEMPORARIA L.
Common Frog
1960 onwards
pre 1960
0 100
Kilometres
0 100
Miles
HX
HW
N2
N1
CHANNEL ISLANDS
PLOTTED ON
UTM GRID
WA
WV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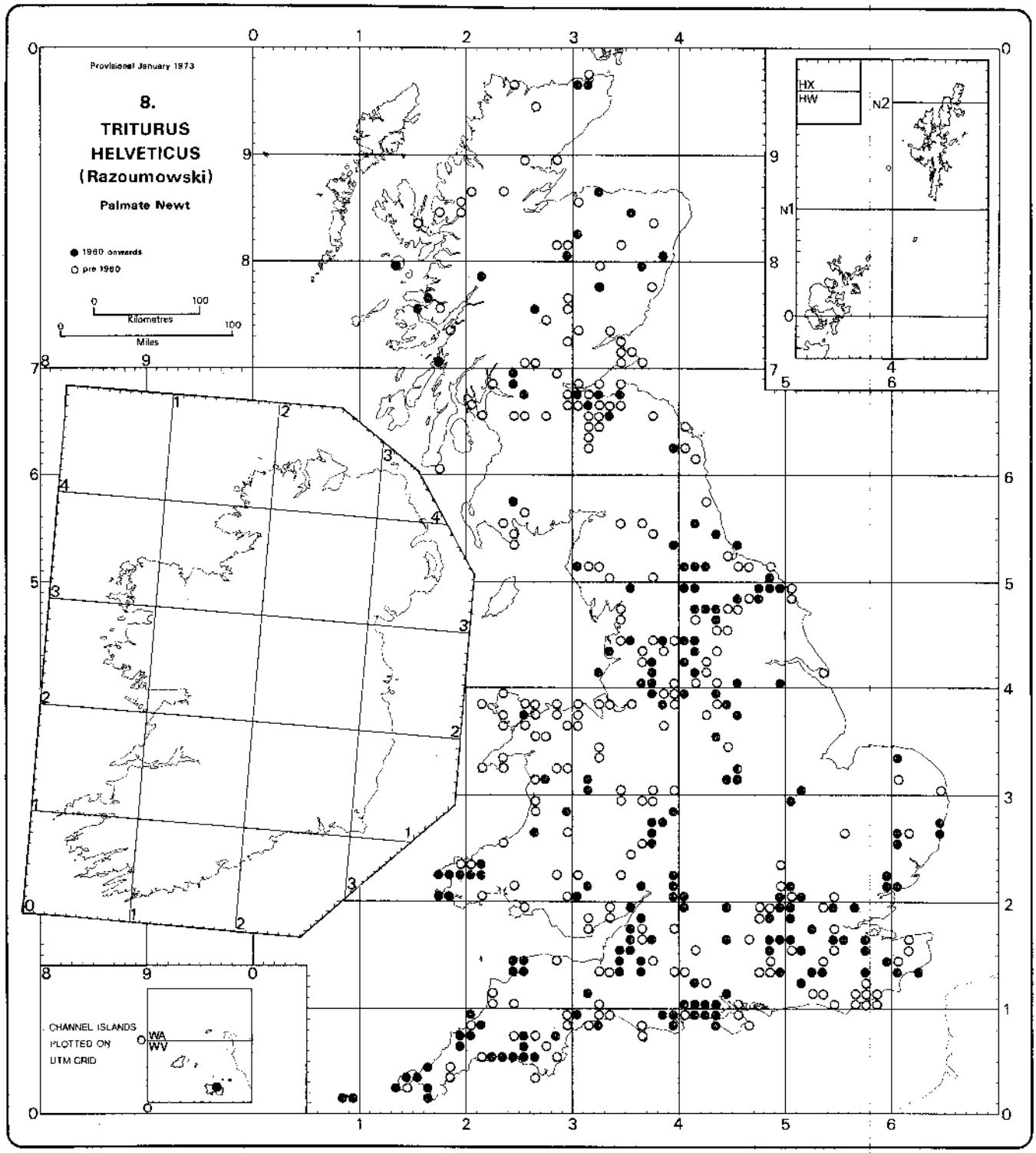
TRITURUS
CRISTATUS
(Laurenti)
Great Crested Newt
1960 onwards
pre 1960
0 100
Kilometres
0 100
Miles
HX
HW
N2
N1
CHANNEL ISLANDS
PLOTTED ON
UTM GRID
WA
WV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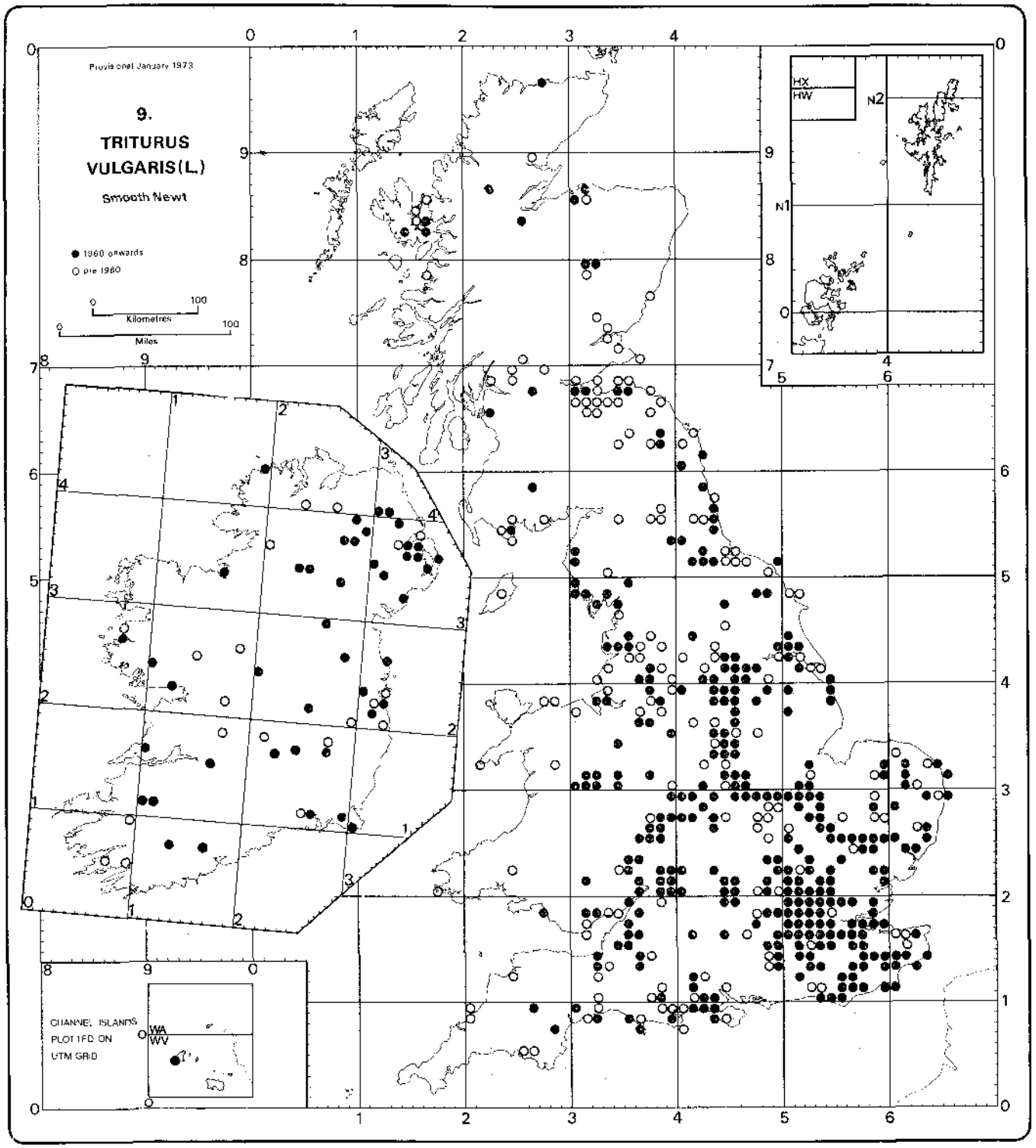
TRITURUS
HELVETICUS
(Razoumowski)
Palmate Newt
1980 onwards
pre 1980
0 100
Kilometres
0 100
Miles
HX
HW
N2
N1
CHANNEL ISLANDS
PLOTTED ON
UTM GRID
WA
WV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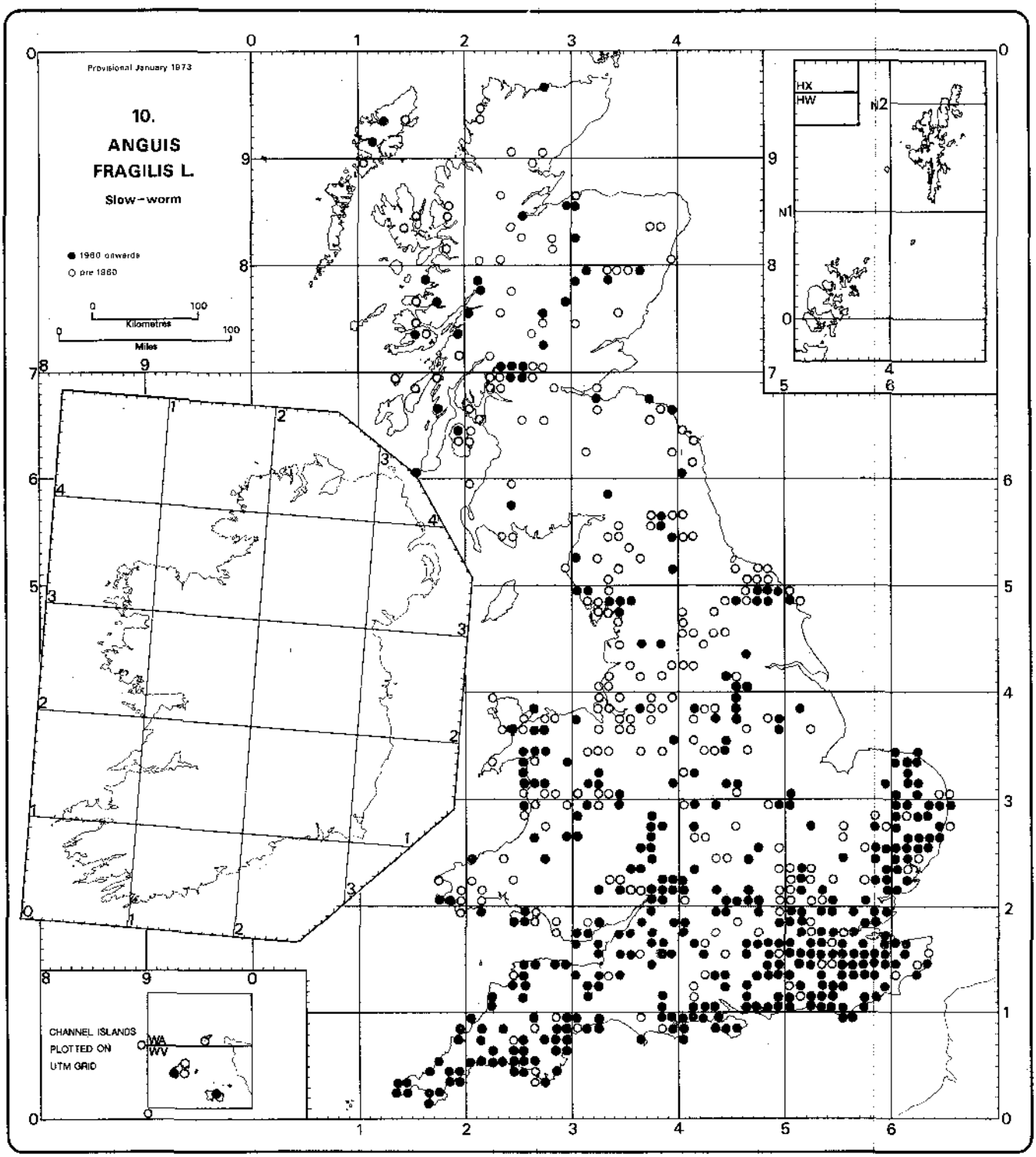
TRITURUS
VULGARIS (L.)
Smooth Newt
● 1960 onwards
○ pre 1960
0 100
Kilometres
0 100
Miles
HX
HW
N2
N1
CHANNEL ISLANDS
PLOTTED ON
UTM GRID
WA
WV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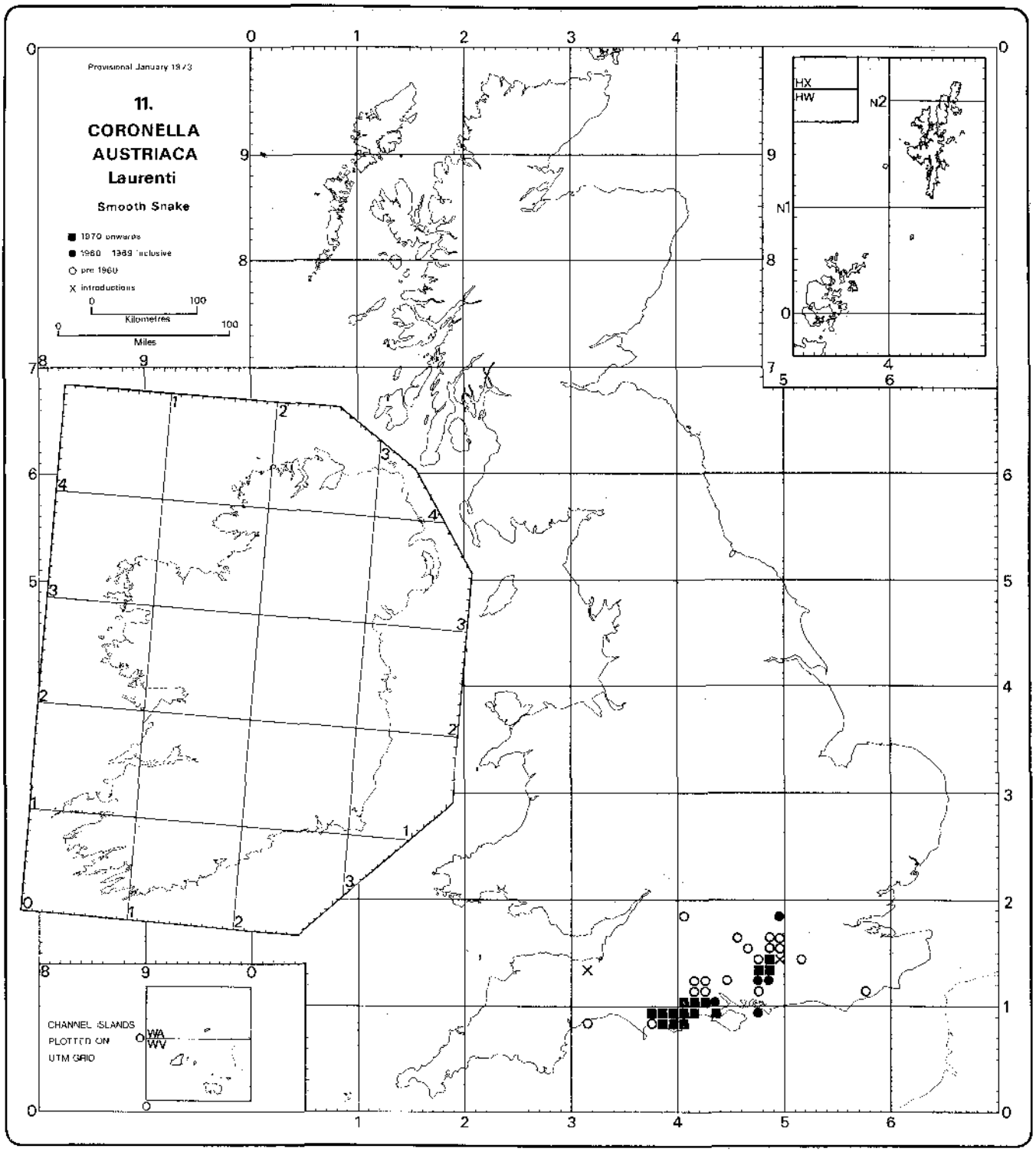
ANGUIS
FRAGILIS L.
Slow-worm
● 1960 onwards
○ pre 1960
0 100
Kilometres
0 100
Miles
HX
HW
N2
N1
CHANNEL ISLANDS
PLOTTED ON
UTM GRID
WA
WV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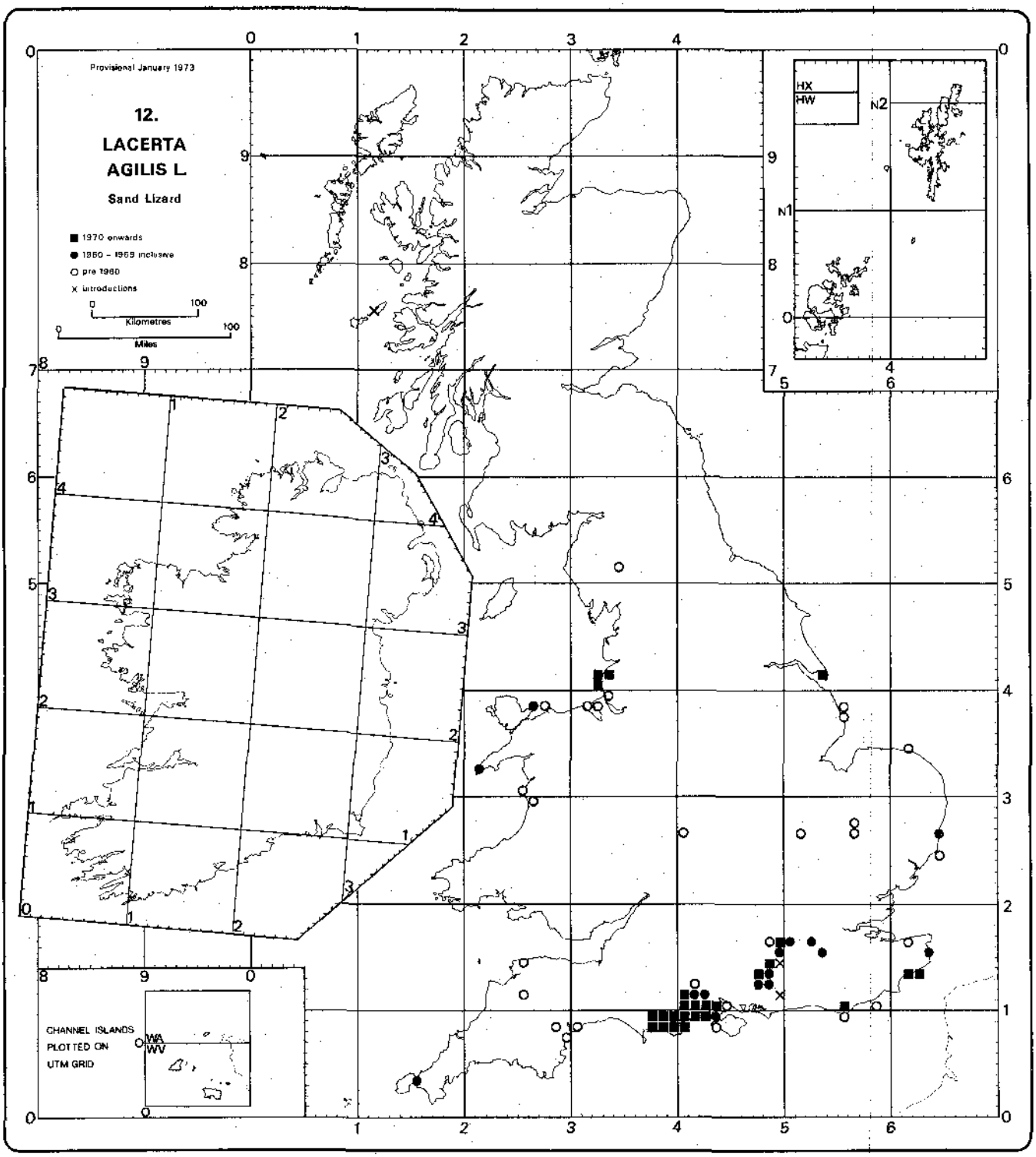
11.
CORONELLA
AUSTRIACA
Laurenti
Smooth Snake
1970 onwards
1960 - 1969 inclusive
pre 1960
X introductions
0 100
Kilometres
0 100
Miles
HX
HW
N2
N1
CHANNEL ISLANDS
PLOTTED ON
UTM GRID
WA
WV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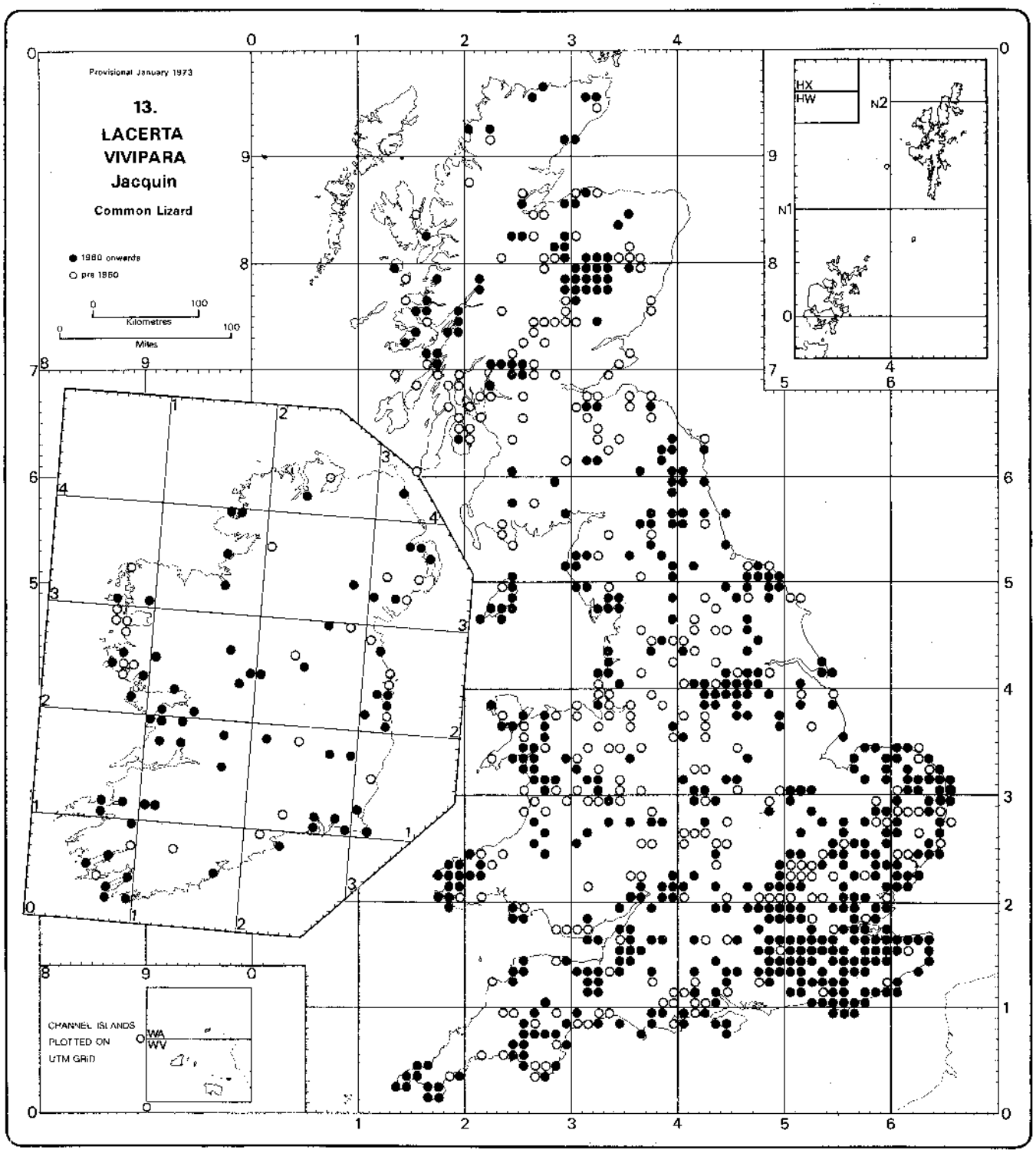
LACERTA
AGILIS L.
Sand Lizard
1970 onwards
1960 – 1969 inclusive
pre 1960
Introductions
Kilometres
Miles
HX
HW
N2
N1
CHANNEL ISLANDS
PLOTTED ON
UTM GRID
WA
WV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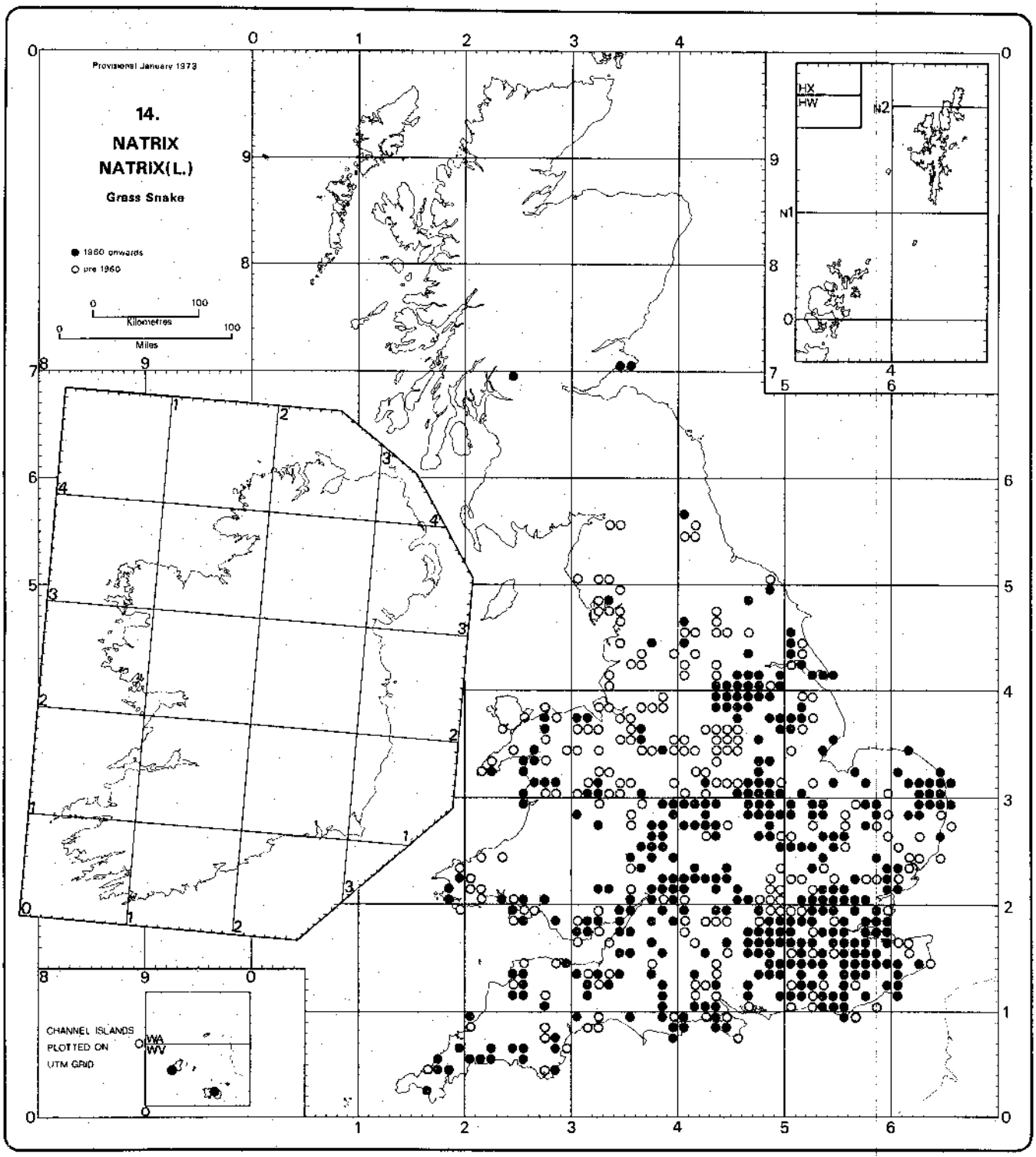
LACERTA
VIVIPARA
Jacquin
Common Lizard
1980 onwards
pre 1960
0 100
Kilometres
0 100
Miles
HX
HW
N2
N1
CHANNEL ISLANDS
PLOTTED ON
UTM GRID
WA
WV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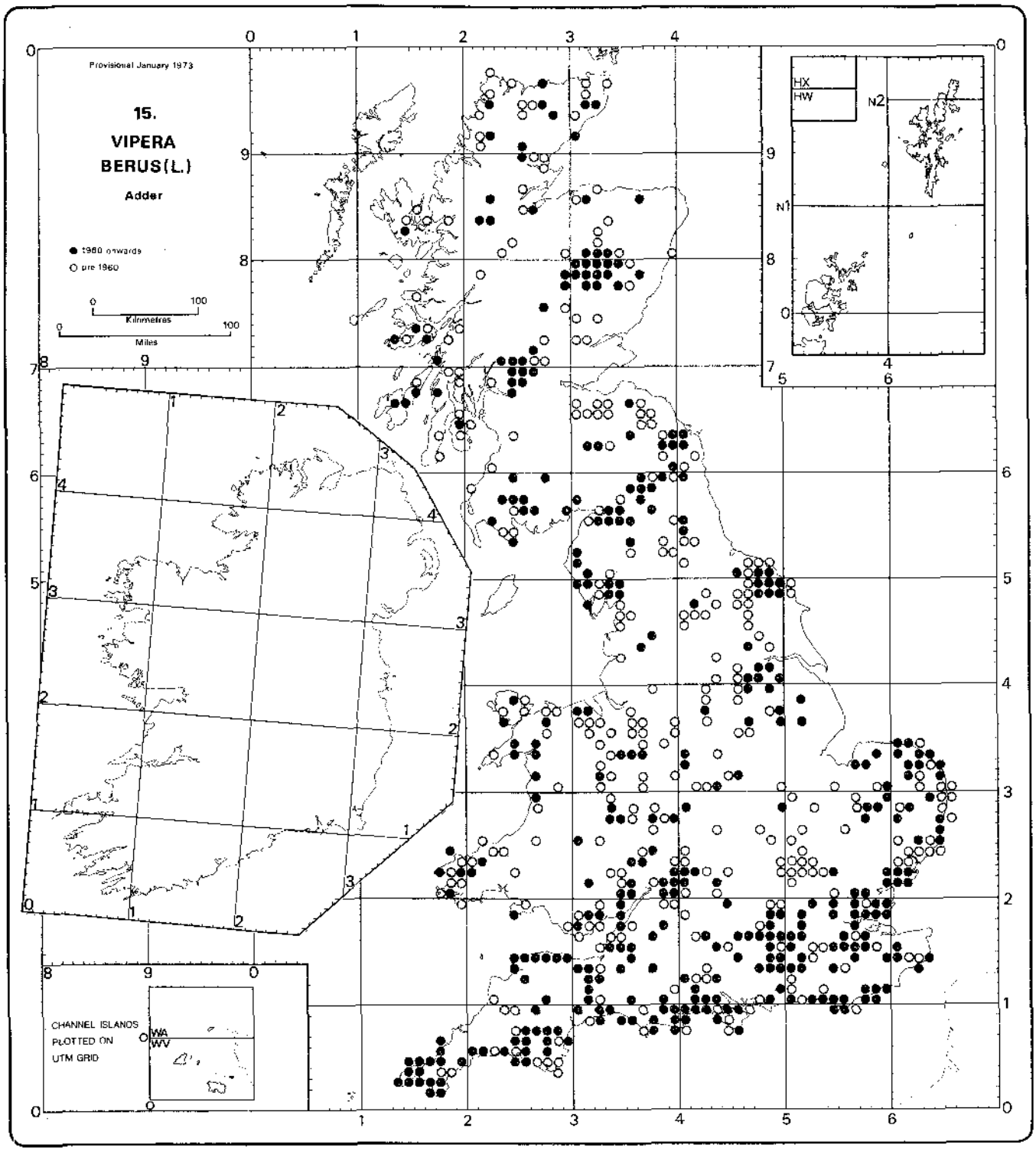
NATRIX
NATRIX(L.)
Grass Snake
1960 onwards
pre 1960
0 100
Kilometres
0 100
Miles
HX
HW
N2
N1
CHANNEL ISLANDS
PLOTTED ON
UTM GRID
WA
WV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15.
VIPERA
BERUS(L.)
Adder
● 1960 onwards
○ pre 1960
0 100
Kilometres
0 100
Miles
HX
HW
N2
N1
CHANNEL ISLANDS
PLOTTED ON
UTM GRID
WA
WV