

## **Cumulative frequency diagrams to accompany Annetwell Street Insect Report 1**

[NB: This report was scanned and reformatted on 5<sup>th</sup> March 2008. The text and tables appear in a separate file. The cumulative frequency graphs are presented here, primarily because this is one of the few reports for which they were prepared. The original was an archive report deposited at Environmental Archaeology Unit, Carlisle Archaeology Unit and Ancient Monuments Laboratory, and allocated *post hoc* as *Reports from the Environmental Archaeology Unit, York 86/20.*]

Plots for small assemblages (generally those with less than 100 individuals) have been omitted.

These diagrams are explained by Kenward *et al.* (1986, 246 and fiche figs. 59-61), and their value discussed more fully by Kenward and Large (1998).

Kenward, H. K., Hall, A. R. and Jones, A. K. G. (1986). Environmental evidence from a Roman well and Anglian pits in the legionary fortress. *The Archaeology of York* **14** (5), 241-88 + Fiche 2. London: Council for British Archaeology.

Kenward, H. and Large, F. (1998b). *Insects in urban waste pits in Viking York: another kind of seasonality.* *Environmental Archaeology* **3**, 35-53.

Cumulative frequency in 1-taxon steps

Annetwell Street, Carlisle

CAR80-84AHH

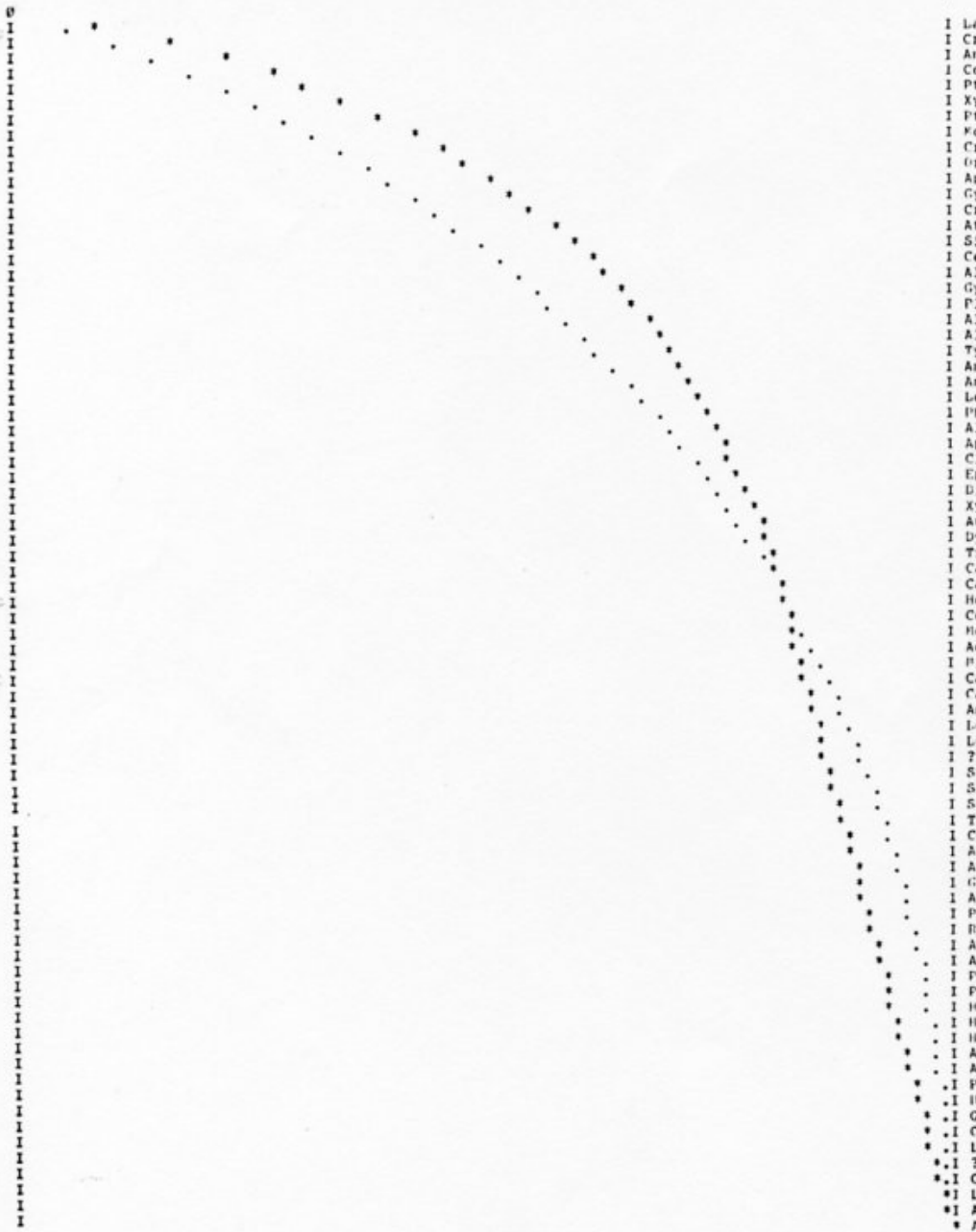
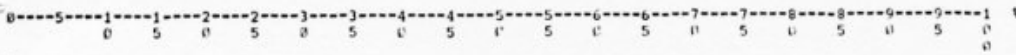
CONTEXT 2451.4

SAMPLE 207/1

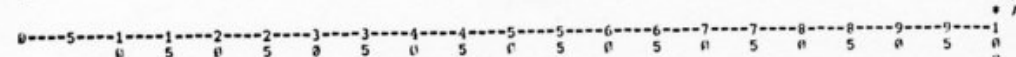
3 kg

N = 229

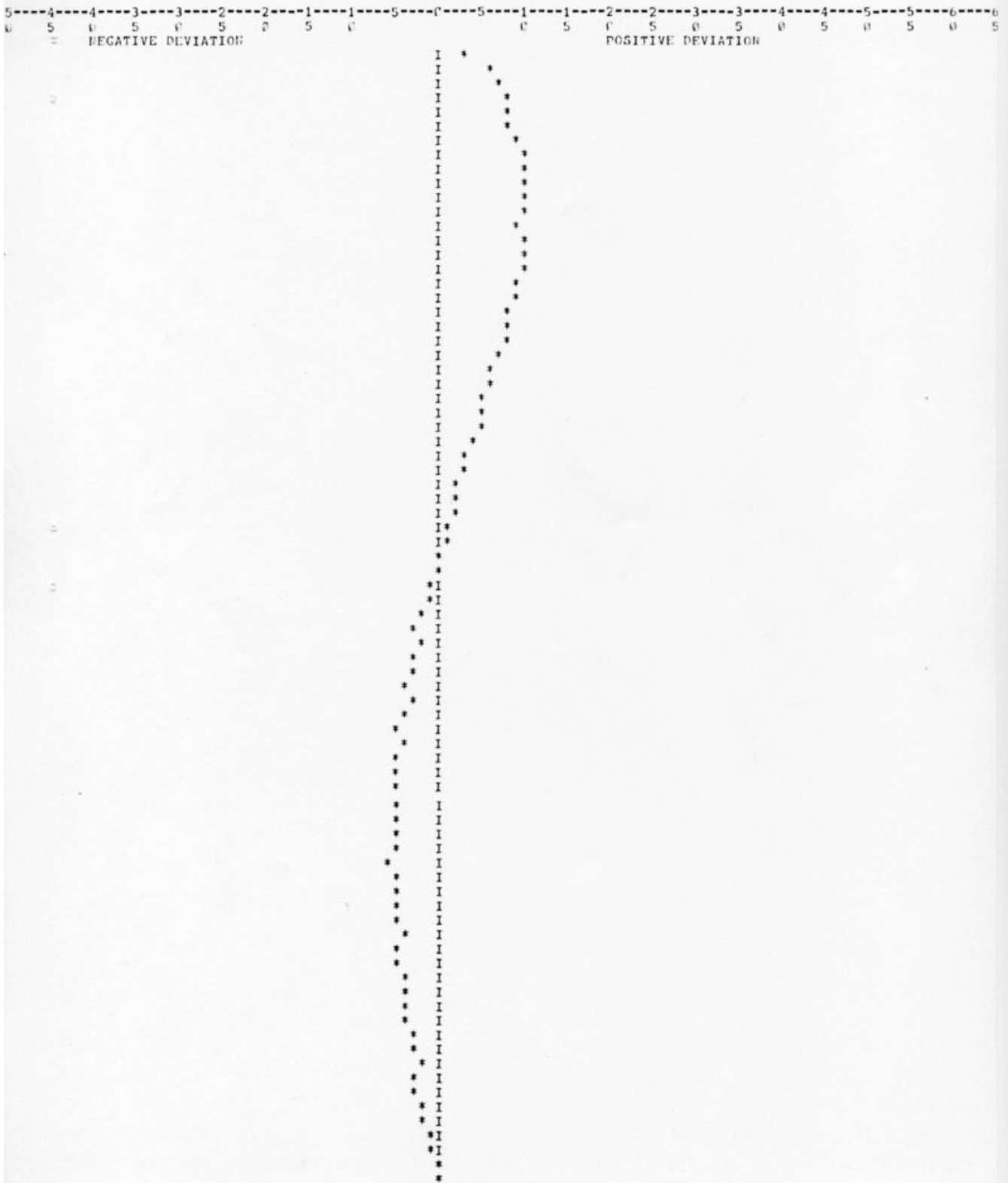
S = 79



- I Lathridius minutus group
- I Cryptophagus sp.
- I Anthicus formicarius
- I Corticaria sp.
- I Ptenidium pusillum type
- I Xylodromus concinnus
- I Pinus 2fur
- I Monotoma bicolor
- I Cryptolestes ferrugineus
- I Gryzaemilius surinamensis
- I Apion sp. C
- I Gyrohypnus fracticornis
- I Cryptophagus scutellatus
- I Atomaria nigripennis
- I Sitophilus granarius
- I Cercyon analis
- I Aleocharinae sp. E
- I Gymnetron sp. B
- I Platystethus arenarius
- I Aleocharinae sp. A
- I Aleocharinae sp. X
- I Typhaea stercorea
- I Anotylus rugosus
- I Anotylus tetracarينات
- I Leptacinus sp. B
- I Philonthus sp. A
- I Aleocharinae sp. D
- I Aphodius ?proditonus
- I Ciambus ?pubescens
- I Ephistemus globulus
- I Dienerella sp.
- I Xyllocoris ?cursitans
- I Auchenorrhyncha sp. B
- I Dyschirius globosus
- I Trechus obtusus or quadristria
- I Carabidae sp. A
- I Carabidae sp. P
- I Helophorus sp.
- I Cercyon sp.
- I Megasternum obscurum
- I Acrotrichis sp.
- I Micropeplus rufus
- I Carpellinus ?bilineatus
- I Carpellinus pusillum group
- I Anotylus nitidulus
- I Leptacinus sp.
- I Leptacinus sp. A
- I ?Philonthus sp.
- I Staphylininae sp. A
- I Staphylininae sp. B
- I Staphylininae sp. C
- I Tachycorus sp.
- I Cordulia obscura
- I Aleocharinae sp. B
- I Aleocharinae sp. C
- I Geotrupes sp.
- I Aphodius sp.
- I Phyllopertha horticola
- I Rhizophagus sp.
- I Atomaria sp. A
- I Atomaria sp. B
- I Falorus ratzeburgi
- I Phyllotreta ?nemorum group
- I Halticinae sp.
- I Halticinae sp. A
- I Halticinae sp. B
- I Apion sp. A
- I Apion sp. B
- I Phyllobius or Polydorus sp.
- I Hygiera nigrirostris
- I Gymnetron sp. A
- I Curculionidae sp.
- I Lygaeidae sp.
- I Thlytocoris campestris
- I Cicicidae sp.
- I Loricula pselaphiformis
- I Aphodes flavostriatus
- I Auchenorrhyncha sp. A
- I Auchenorrhyncha sp. C

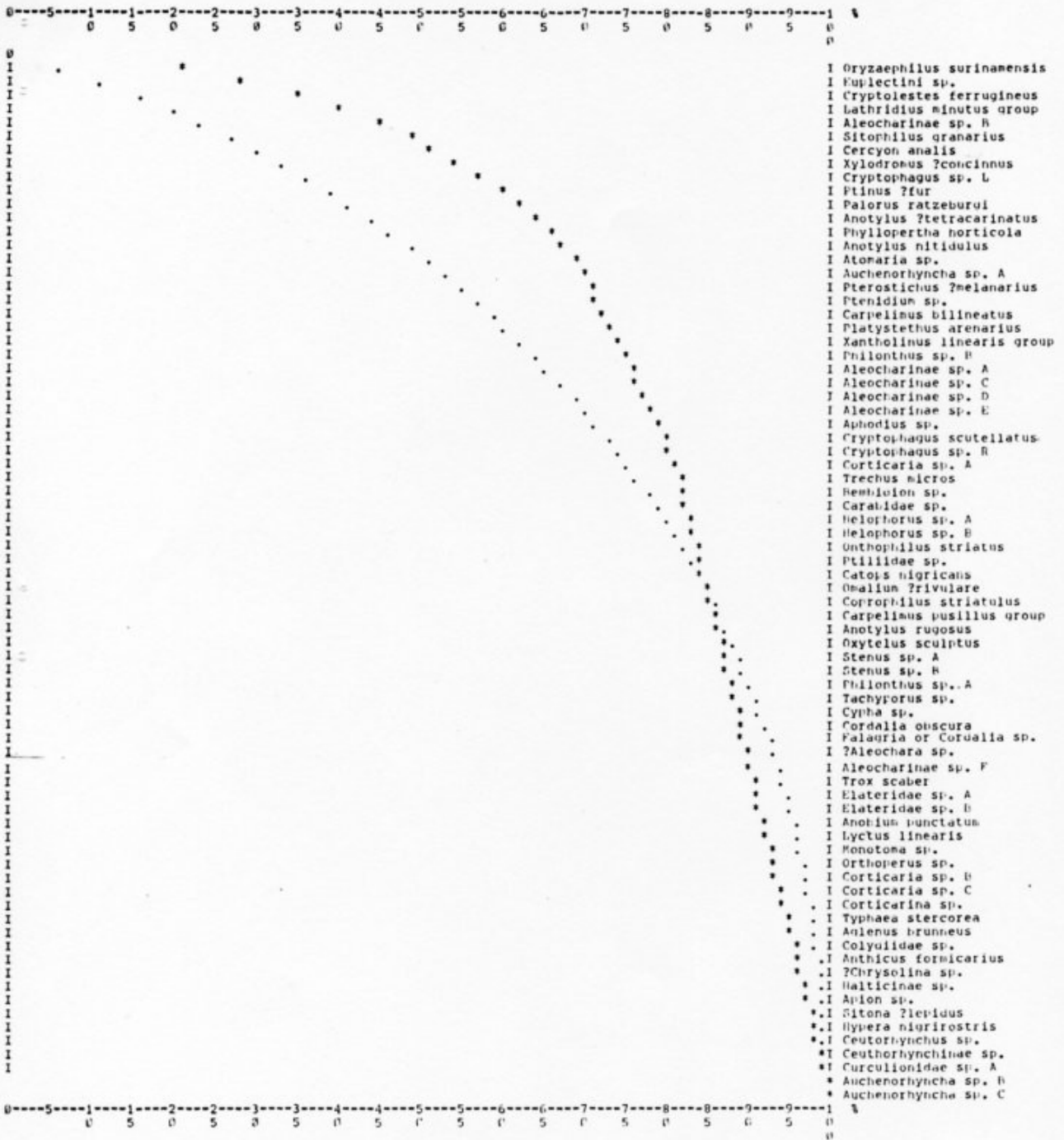


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Deviations of observed from MacArthur's distribution for cumulative frequency  
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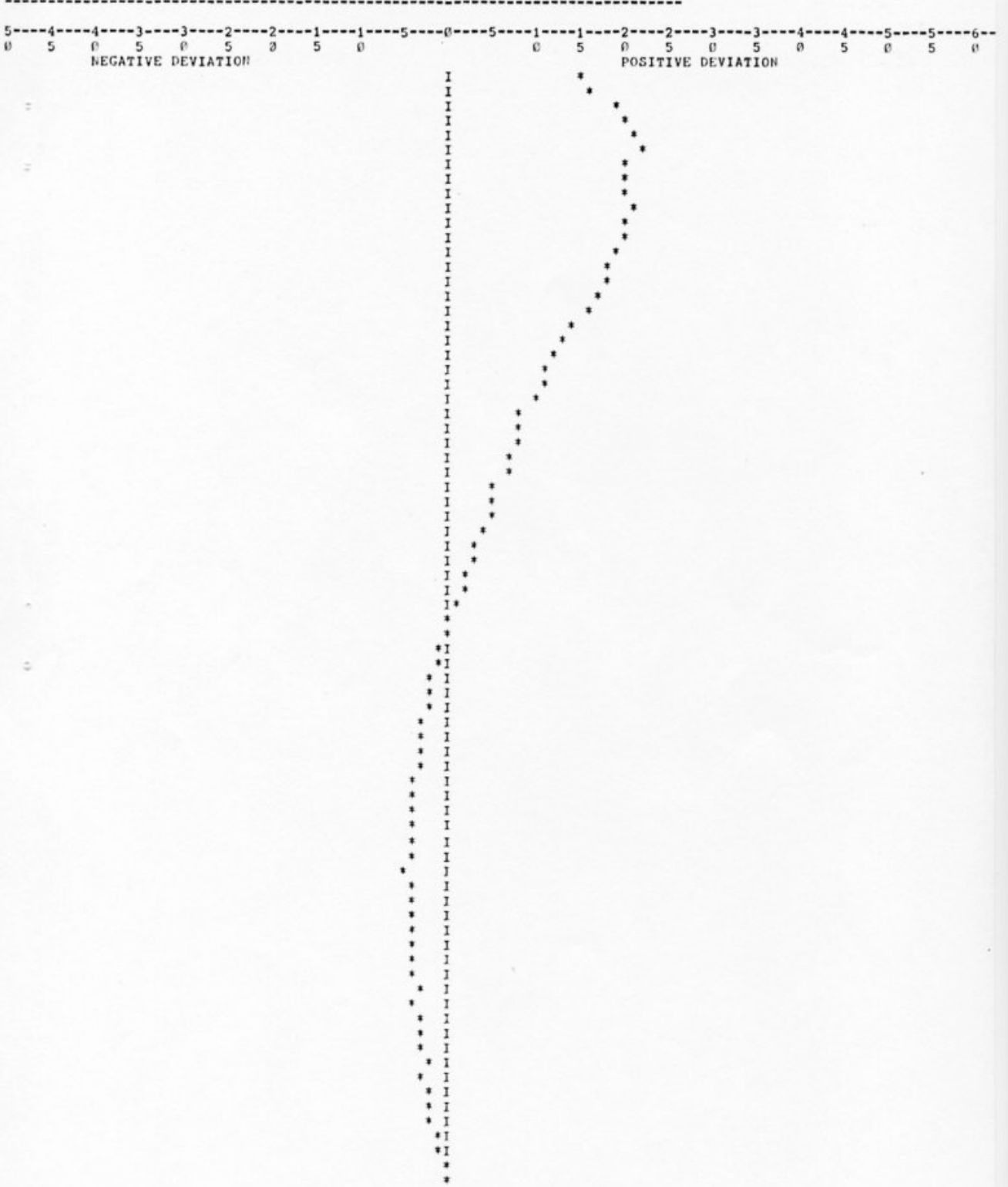
Cumulative frequency in 1-taxon steps

Annetwell Street, Carlisle CAR80-84AHH CONTEXT 2452.3 SAMPLE 208/1 3 kg N = 245 S = 76



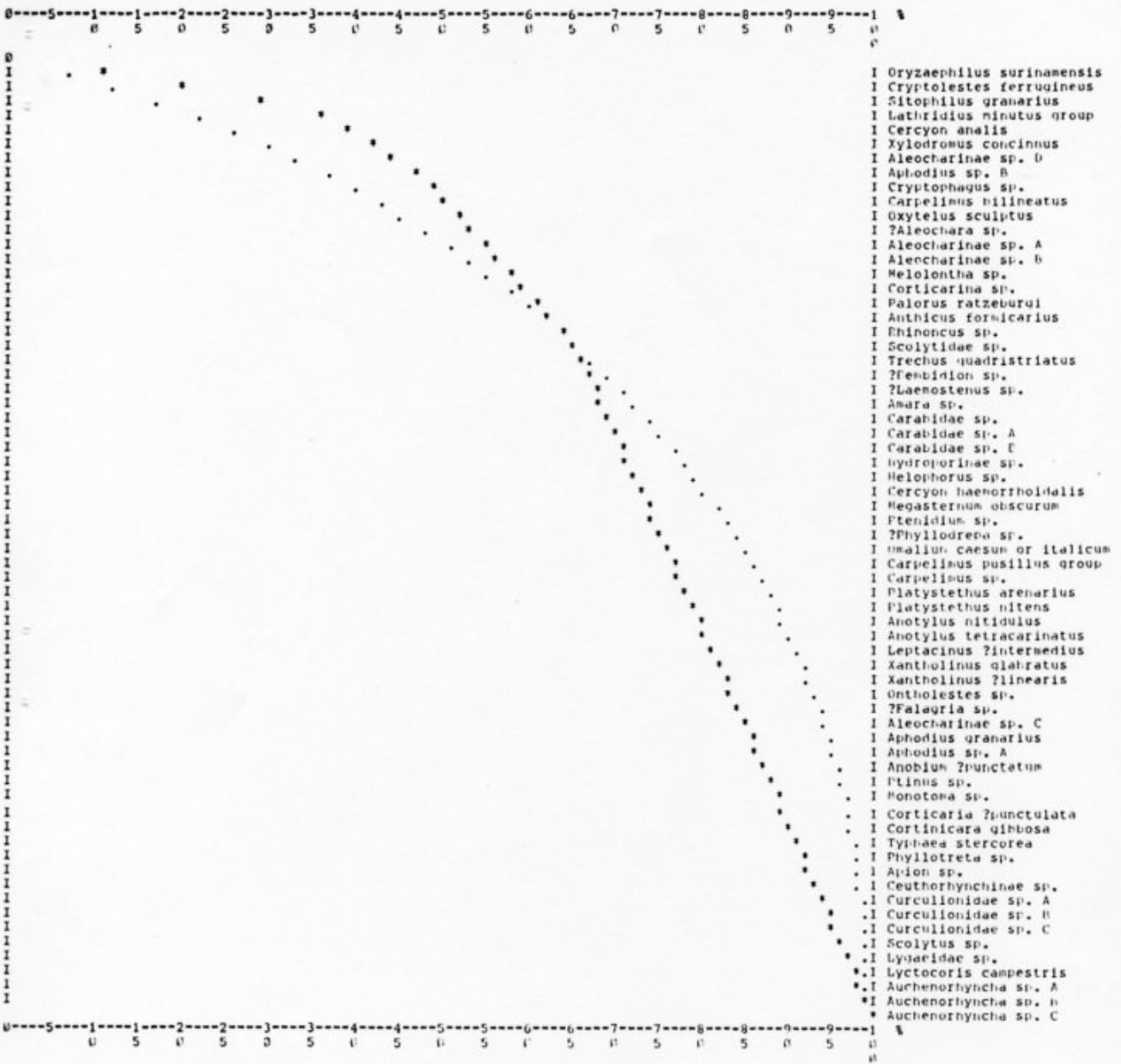
KEY: ... - based on MacArthur's distribution; \*\*\* - observed distribution

Deviations of observed from MacArthur's distribution for cumulative frequency



Cumulative frequency in 1-taxon steps

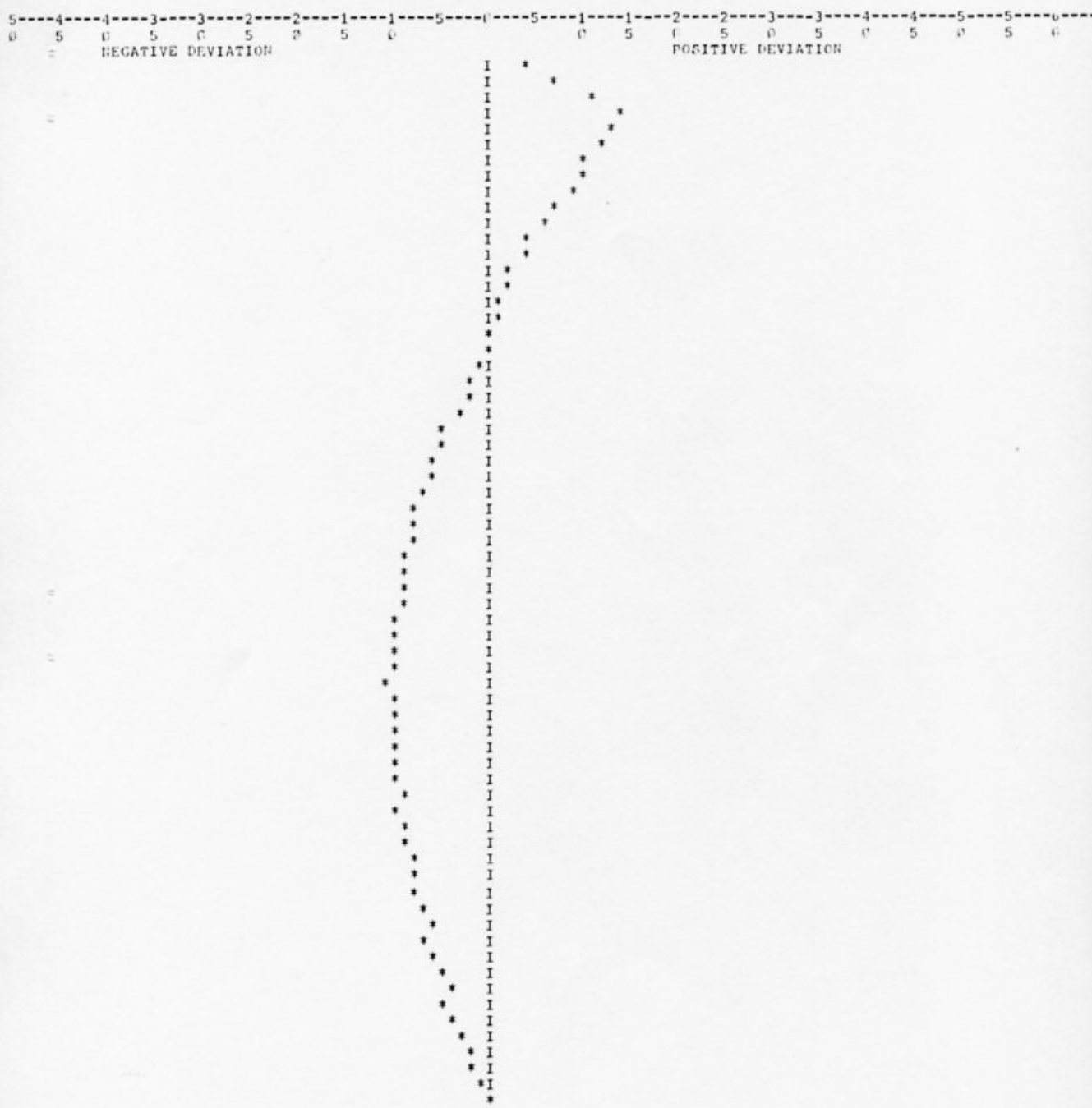
Annetwell Street, Carlisle CAR80-84AHN CONTEXT 2547 SAMPLE 226/1 2.2 kg N = 133 S = 66



KEY: ... - based on MacArthur's distribution; \*\*\* - observed distribution

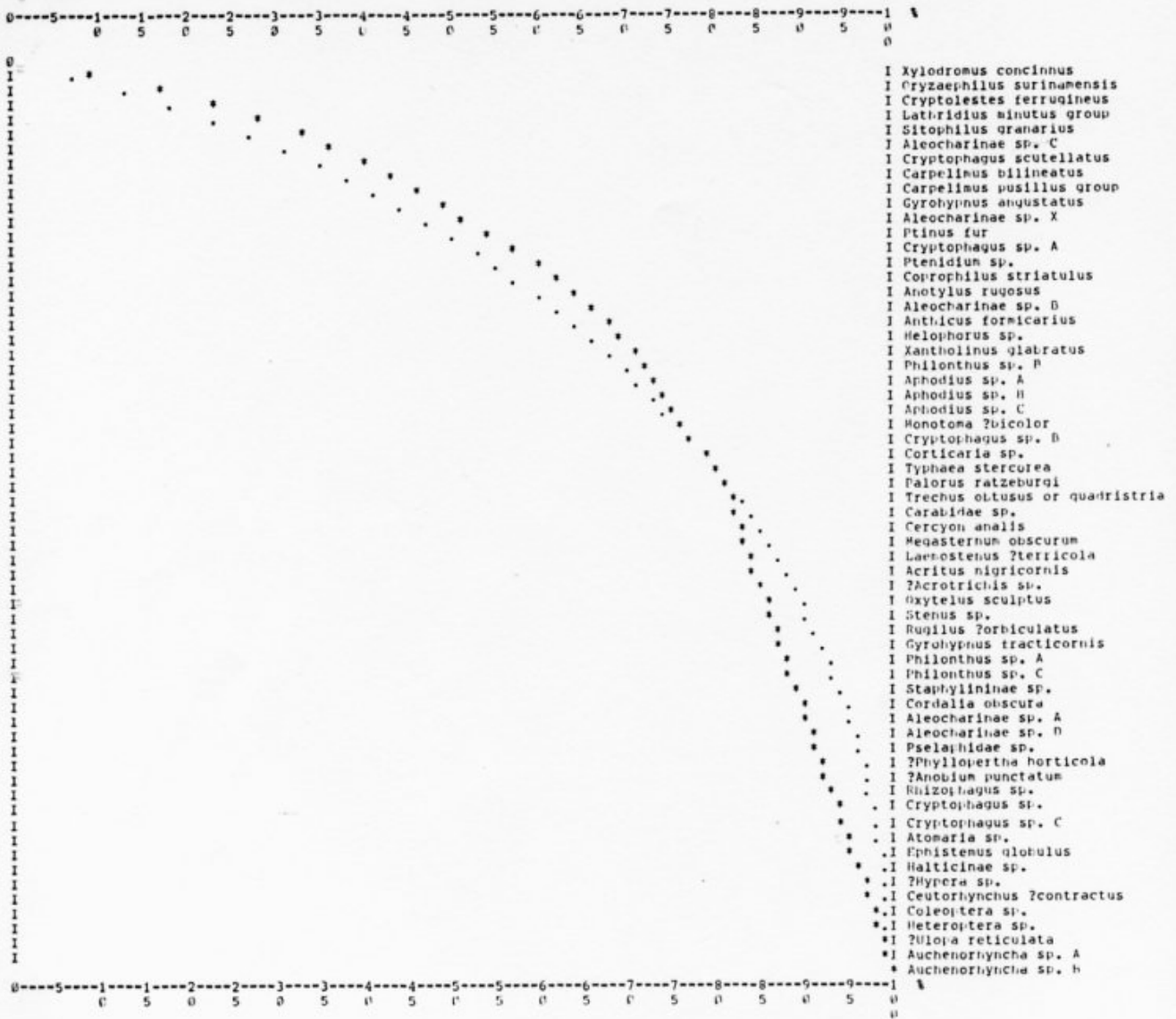
Annetwell Street, Carlisle CAR84-84AEN CONTEXT 2547 SAMPLE 226/1 2.2 kg N = 133 S = 66

Deviations of observed from MacArthur's distribution for cumulative frequency



Cumulative frequency in 1-taxon steps

Annetwell Street, Carlisle CAR80-84ANN CONTEXT 2770 SAMPLE 233/1 3 kg N = 173 S = 62



KEY: ... - based on MacArthur's distribution; \*\*\* - observed distribution



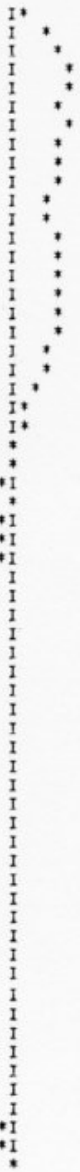
Annetwell Street, Carlisle      CARBO-84APP      CONTEXT 2770      SAMPLE 233/1      3 kg      n = 173      S = 62

Deviations of observed from MacArthur's distribution for cumulative frequency

-----5-----4-----4-----3-----3-----2-----2-----1-----1-----5-----0-----5-----1-----1-----2-----2-----3-----3-----4-----4-----5-----5-----6-----  
0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0

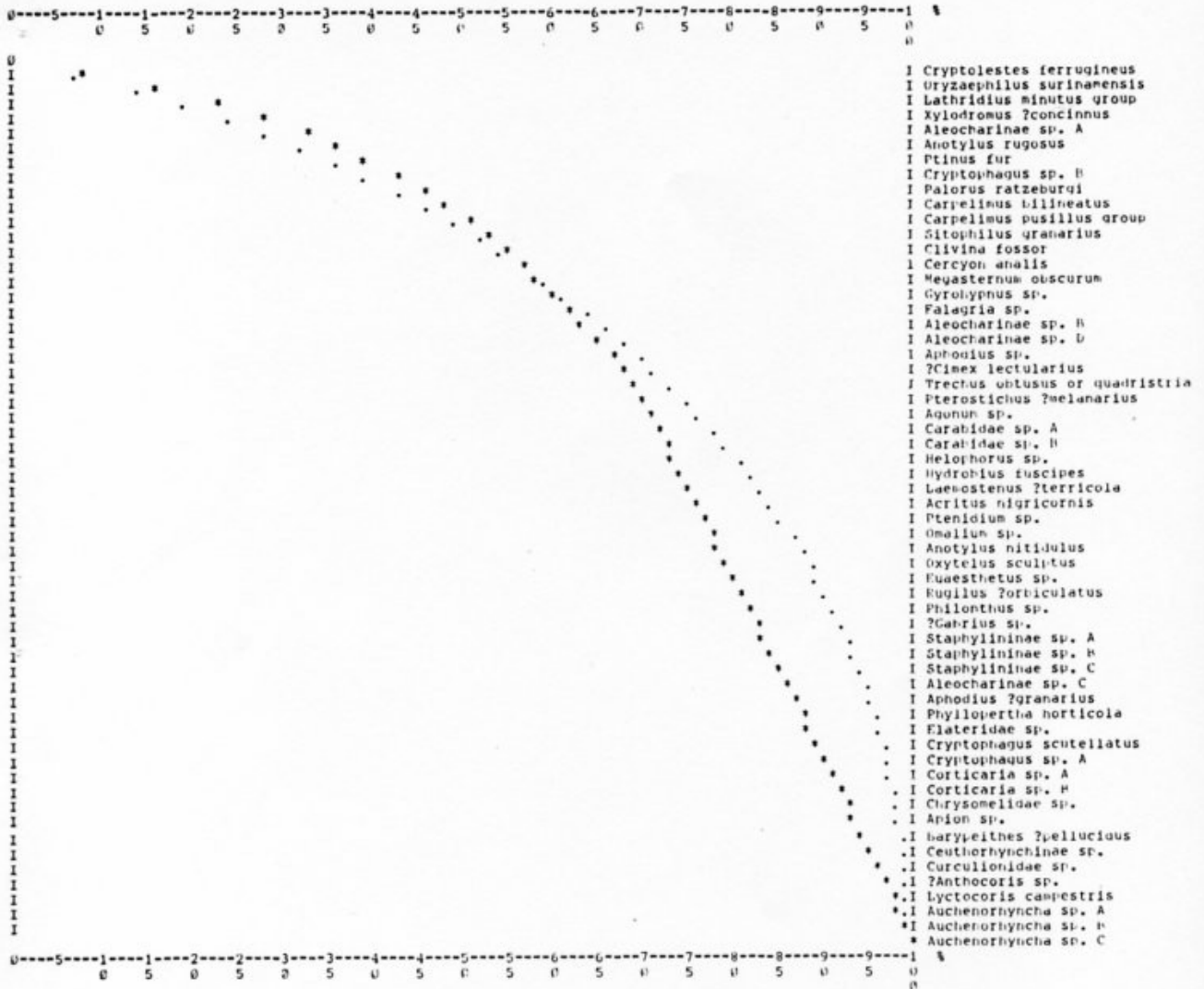
NEGATIVE DEVIATION

POSITIVE DEVIATION



Cumulative frequency in 1-taxon steps

Annetwell Street, Carlisle CAR80-84ANN CONTEXT 2786 SAMPLE 234/1 3 kg N = 120 S = 59



KEY: ... - based on MacArthur's distribution; \*\*\* - observed distribution

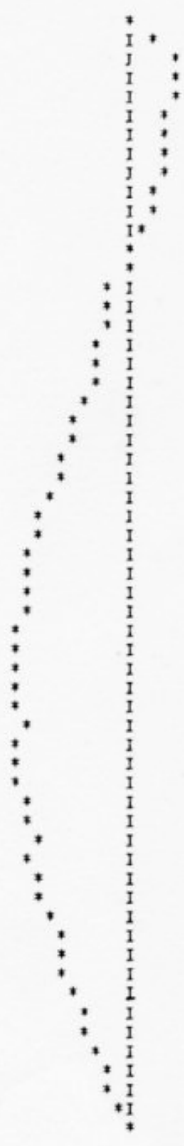
Annetwell Street, Carlisle      CAP80-84ANN      CONTEXT 2786      SAMPLE 234/1      3 kg      n = 120      S = 59

Deviations of observed from MacArthur's distribution for cumulative frequency  
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5---4---4---3---3---2---2---1---1---5---0---5---1---1---2---2---3---3---4---4---5---5---6---  
0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0   5   0

NEGATIVE DEVIATION

POSITIVE DEVIATION





Annetwell Street, Carlisle

CAR80-84ANN

CONTEXT 2908

SAMPLE 239/1

3 kg

n = 101

S = 45

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Deviations of observed from MacArthur's distribution for cumulative frequency  
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5---4---4---3---3---2---2---1---1---5---0---5---1---1---2---2---3---3---4---4---5---5---6---6---7  
0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0

NEGATIVE DEVIATION

POSITIVE DEVIATION

