Chester Zoo News

AND GUIDE

THE NORTH OF ENGLAND ZOOLOGICAL SOCIETY
ZOOLOGICAL GARDENS, UPTON-BY-CHESTER

February 1977 Price 12p

The North of England Zoological Society

ZOOLOGICAL GARDENS, UPTON-BY-CHESTER

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ILLUSTRATIONS

COVER

Grevy's Zebra mare and foal

By courtesy of A. R. Granger, Cheshire Observer

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Telephone Chester 20106/7/8

COVER PHOTOGRAPH

The Cover Photograph for this month is that of our Grevy's Zebra foal (*Equus grevyi*), born on the 29th December last. We hope to have mother and baby (a female) on show in the paddock when the weather is better, but for the present they are in their indoor quarters where they can be kept warm.

GENERAL NEWS

In January 1974 we received into the collection a pair of Green Monkeys (*Cercopithecus sabaeus*). They had one offspring prior to their arrival. Two youngsters were subsequently born to them at Chester Zoo but unfortunately the mother was not able to rear them and they died. However a third youngster has recently been born and appears to be quite well. We have every confidence that this one will survive. The baby has not yet been sexed.

* * *

Chimp "Chi-chi" recently gave birth to a male who has been named "Chad". Two days ago the mother lost interest in her baby and he is now being hand-reared.

INSECTARIUM

Readers will be interested to know that we have opened the nucleus of an Insectarium inside the Tropical House. We are showing two young Bird Eating Spiders (*Theraphosa avicularia*), four species of Stick Insects—the Pink-winged Stick, the Annam Stick, Macleay's Spectre, the Javenese Lichen (or Mossy) Stick and the Indian Stick.

There are six Black Scorpions (*Palamnaeus swammerdami*) in the collection. These are very young, being quite small at this time. When we are ready to put them on show we will be writing about scorpions in general.

Bird Eating Spiders (*Theraphosa avicularia*) originate from South

East Asia and the West Indies. They are not venomous, but they do use their ½-inch long fangs for paralizing their prey. By ejecting liquid into their prey they then digest it externally, flicking away bones and any matter which they cannot eat. Their food consists of locusts, young mice and possibly a fledgling.

Our two spiders are not fully grown, but their bodies will eventually be about the size of a golfball, and the leg span, according to the different species, will be 8/10in.

Not much is written about spiders, but it is interesting to know that Bird Eaters shed their outer skins periodically as they grow; these fall off in their entirety. Whilst this process is taking place each spider makes a web around itself for protection and this drops away as the old skin comes off; at a touch one can feel how strong the web is—rather like a piece of strong opaque white material.

All spiders have eight legs, and the colouring of the Bird Eating Spider is a dark to light golden brown; the skin would appear to be of a furry substance. These spiders are nocturnal except when hungry during the daytime, when they move about in search of food.

Sometimes their delicate legs are broken off, and if the spider is a young one it stands much more chance of growing a complete new limb.

* * *

Stick Insects are also nocturnal, sitting around almost motionless all day. These insects have six legs and two antennae. They do not need to mate but females alone will breed only females; if there is a male amongst the group, then they will breed a male.

The distribution of the Pink-winged Stick (*Sipyloidea sipylus*) is East Asia, the East Indies and Australia. A fairly recent introduction was to Madagascar and this insect is sometimes known as the "Madagascan" Stick Insect, which is strictly female. The native stick however contains both sexes. Pink-winged Sticks are prolific.

An adult female will grow to about 85mm. in length; its legs

and antennae are very long and thin; the body is a parchment colour. The wings extend almost to the end of the insect's body, and when expanded display a delicate pink. The function of the wings would appear to be to assist in a downward glide, rather than an upward flight.

When searching for eggs in the enclosure these may be found glued to a surface rather than lying on the ground; they may be adhered to the framework, logs or stones, and to foodplant. Used foodplant should be carefully examined before being discarded. The egg is large, hairy and elongated; there are raised and sunken markings on the shell. The operculum is set at an angle to ease the hatching of the young nymph. Incubation is about ten weeks, and the eggs require no special attention. When hatched, the nymph is very weak-looking, but quite active when disturbed. It is a bright green and this colour remains throughout the nymphal stages. Both nymph and adult insects feed on Bramble (*Robus fruticosus*).

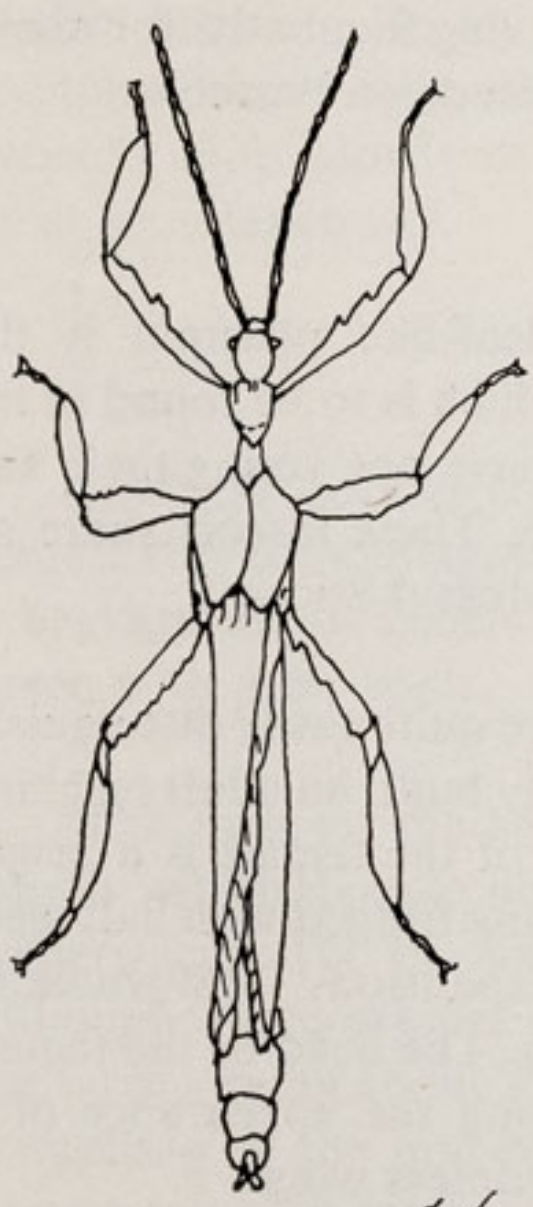
* * *

We have about twelve Annam Stick Insects (*Baculum extradentatum*) at present; the species originates from Vietnam. Adults of both sexes are a greenish-brown colour, and are wingless. The male is a very slender insect and grows to about 70mm. long; the adult female will grow to about 95mm. in length and is not only bulkier but has tiny spines on her legs. Both male and female have very short antennae which have flattened basal segments. The female of the species has two horn-like protruberances by the eyes.

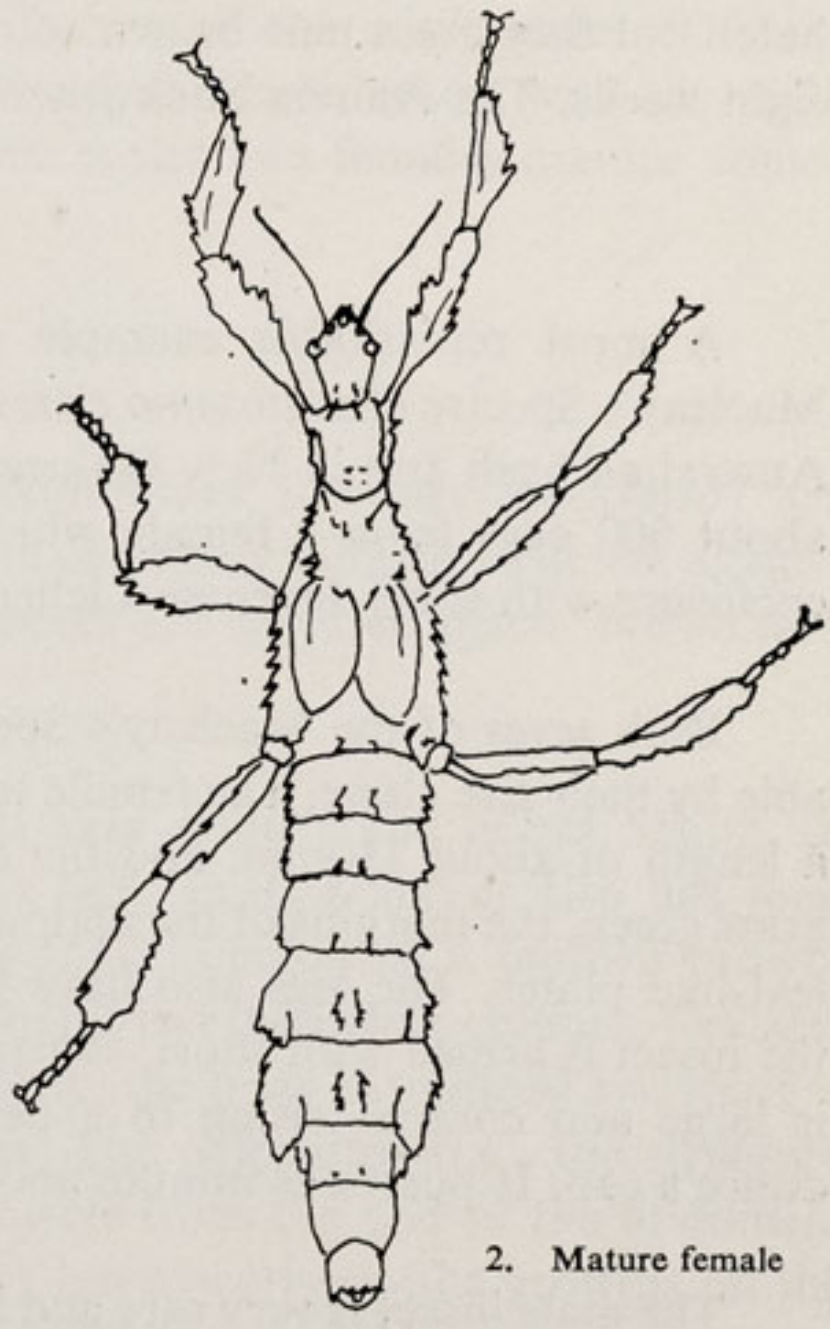
This seems to be a particularly fragile species, and in the wild the males have been known to cast all their limbs and consequently starve to death, owing to their inability to reach food.

Reproduction without sexual union is well established in this species, about 60% of the eggs hatching. The egg is about 3mm. long, speckled grey and black; the operculum (or lid of the egg) is grey, topped by a shining black, flat capitulum (a knob-like structure lying on top of the operculum). There is a small hole in the side of the egg which is called a micropyle, and the plate on which this is situated is grey and very small. This is one of the stick insects

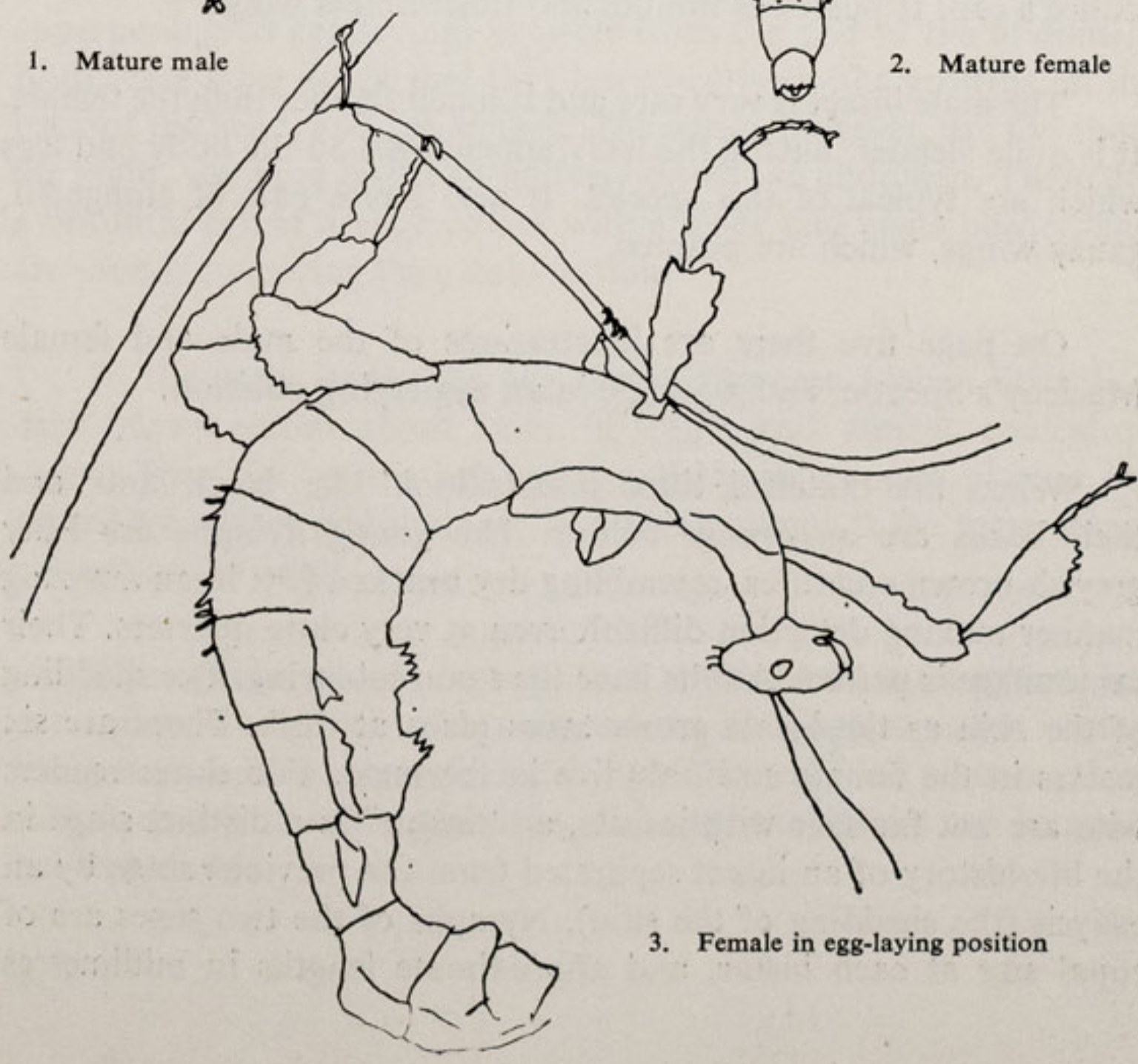
MACLEAY'S SPECTRE (*Extatosoma tiaratum*)



1. Mature male



2. Mature female



3. Female in egg-laying position

which throws its eggs with a flick of the abdomen. When the nymphs hatch out they are a pale brown colour, having incubated for about eight weeks. The Annam Stick Insect also feeds on bramble.

* * *

A most remarkable example of a leaf-like phasmid is the Macleay's Spectre (*Extatosoma tiaratum*) which is to be found in the Australian bush and in New Guinea. We have one young male and about 300 eggs from a female which died. These insects share an enclosure with some Javenese Lichen (or Mossy) Sticks.

Both sexes of the Macleay's Spectre are quite easily distinguishable by their size alone. The female is heavily built, an adult reaching a length of about 110mm. and the colour of the female is a bright grass green, the margins of the abdomen being fringed with flattened, leaf-like plates. The legs also have leafy expansions. The whole of the insect is armed with short, sharp spines. The head of the female is large and conical, rising to a peak giving the appearance of a dunce's cap. It possesses minute and functionless wings.

The male insect is very rare and is much smaller than the female. It is quite slender, having the leafy appendages on the body and legs which are typical of this species. It also has a pair of elongated, gauzy wings, which are pointed.

On page five there are illustrations of the male and female Macleay's Spectre, and a female in an egg-laying position.

When first hatched these insects look like black ants and their heads are an orange colour. The young nymphs are leafy greyish-brown creatures, resembling dry bracken fern in an amazing manner making detection difficult even at very close quarters. Their camouflage is perfect. Adults have the same colouring. The shedding of the skin as the insect grows takes place at dusk. There are six instars in the female and only five in the male. For those readers who are not familiar with insects, an "instar" is a distinct stage in the life-history of an insect separated from the previous stage by an ecdysis (the shedding of the skin). Nymphs of the two sexes are of equal size at each instar, and approximate lengths in millimetres

are 12, 19, 27, 42, 60 and 86 for the six nymphal instars (the sixth female instar is almost equal in size to the adult male). The six nymphal stages take about 100 days in both sexes, with the male growing more slowly so that the males and females mature somewhat simultaneously.

* * *

Javenese Lichen (or Mossy) Sticks (*Orxines macklottii*) are remarkably camouflaged and are extremely difficult to detect against a background of lichen. Both sexes are speckled black, brown and green with paler spots.

The male of the species is very slender and about 55mm. in length with antennae almost as long as its body; it also has long spidery legs. The thorax of the male is coloured a uniforn brown, although the remainder of the body has the lichen colours. Females are larger, being about 70mm. long; the body is rounded and there is a swelling of the mid-abdomen. The ovipositor (*i.e.*, the structure appertaining to egg-laying) projects from the end of the abdomen. Both sexes are alike in that they have two horn-like growths on the back of the head, and are winged. The wings, however, are too short for flight, reaching less than halfway down the abdomen. These are a beautiful bright orange colour with a black and white border, and are used for warning flash colouration.

In the early stages the egg of the Javenese Lichen Stick is a dark brown colour about 5mm. in length and almost conical in shape. The "lid" of the egg is flat and the micropylar plate is obscured by surface undulations. The young nymph is the same colour pattern as the adult.

This species should be kept in a warm moist atmosphere, but can survive at normal room temperature, although moisture is most likely required for successful hatchings. The best food plant for these stick insects is the rhododendron, although the species can be adapted to bramble.

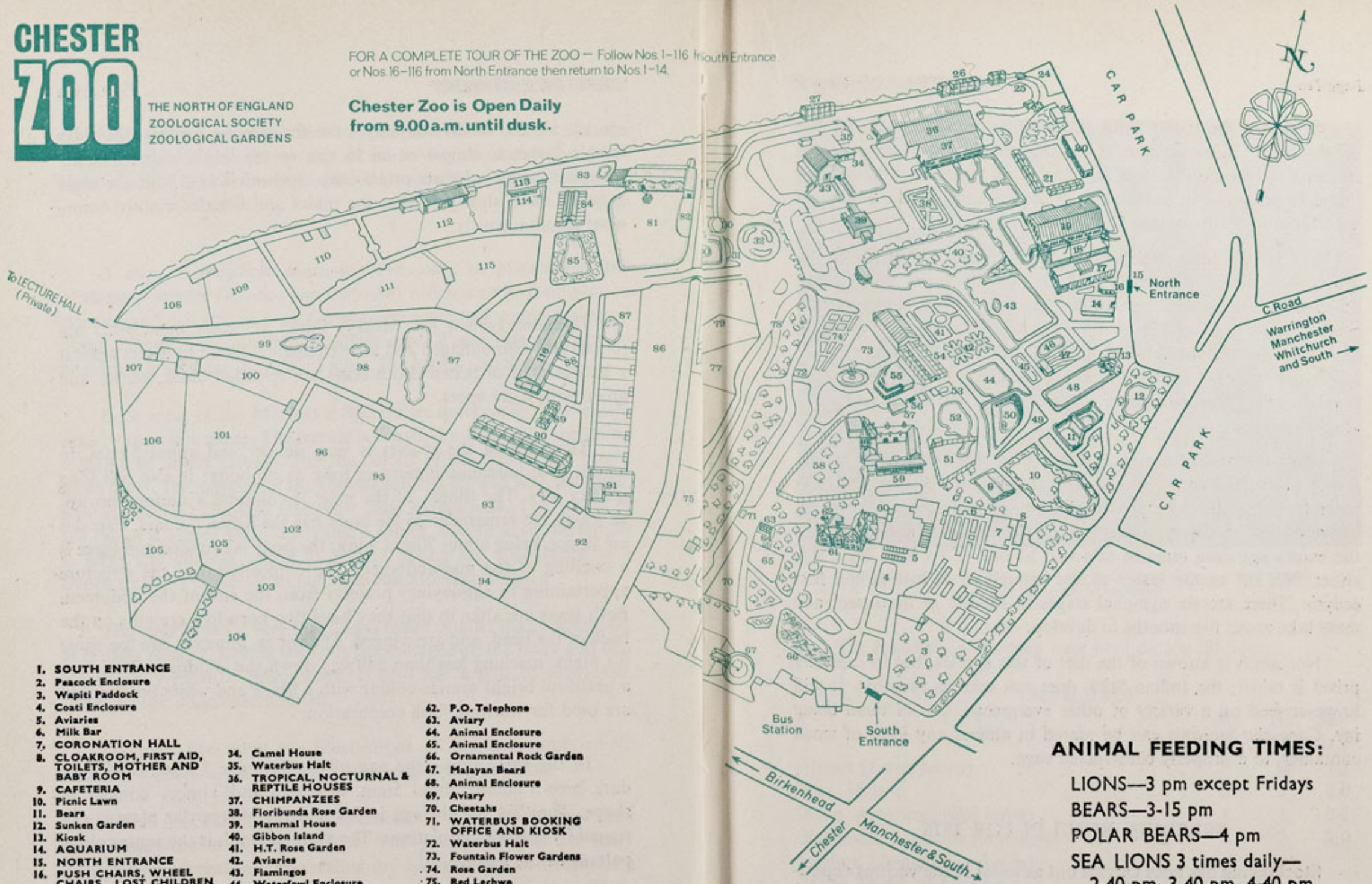
* * *

CHESTER ZOO

THE NORTH OF ENGLAND ZOOLOGICAL SOCIETY ZOOLOGICAL GARDENS

FOR A COMPLETE TOUR OF THE ZOO — Follow Nos. 1–116 from South Entrance or Nos. 16–116 from North Entrance then return to Nos. 1–14.

Chester Zoo is Open Daily from 9.00 a.m. until dusk.



1. SOUTH ENTRANCE
2. Peacock Enclosure
3. Wapiti Paddock
4. Coati Enclosure
5. Aviaries
6. Milk Bar
7. CORONATION HALL
8. CLOAKROOM, FIRST AID, TOILETS, MOTHER AND BABY ROOM
9. CAFETERIA
10. Picnic Lawn
11. Bears
12. Sunken Garden
13. Kiosk
14. AQUARIUM
15. NORTH ENTRANCE
16. PUSH CHAIRS, WHEEL CHAIRS, LOST CHILDREN
17. PARROT HOUSE
18. Free Flight Aviary
19. APE HOUSE
20. Picnic Lawn
21. Aviaries
22. TOILETS
23. Tuatara Exhibit
24. Peccaries
25. Waterbus Halt
26. Birds of Prey Aviaries
27. Condor Aviary
28. Jackal and Hyaena Enclosures
29. Animal Enclosure
30. Porcupine Enclosure
31. Coypus
32. Beavers
33. Giraffe House
34. Camel House
35. Waterbus Halt
36. TROPICAL, NOCTURNAL & REPTILE HOUSES
37. CHIMPANZEES
38. Floribunda Rose Garden
39. Mammal House
40. Gibbon Island
41. H.T. Rose Garden
42. Aviaries
43. Flamingos
44. Waterfowl Enclosure
45. Waterfowl Enclosure
46. Waterfowl Enclosure
47. Penguins
48. Sealions
49. Rock Garden
50. Polar Bears
51. Cat Enclosure
52. Waterfowl Enclosure
53. Anteaters
54. BIRD HOUSE
55. FOUNTAIN RESTAURANT
56. Ape Nursery
57. TOILETS
58. Lions
59. SOUVENIR SHOP
60. TOILETS
61. OAKFIELD RESTAURANT
62. P.O. Telephone
63. Aviary
64. Animal Enclosure
65. Animal Enclosure
66. Ornamental Rock Garden
67. Malayan Bears
68. Animal Enclosure
69. Aviary
70. Cheetahs
71. WATERBUS BOOKING OFFICE AND KIOSK
72. Waterbus Halt
73. Fountain Flower Gardens
74. Rose Garden
75. Red Lechwe
76. Red Lechwe
77. Deer or Antelope Enclosure
78. Waterbus Halt
79. Zebra and Deer Enclosure
80. Kamchatka Bears
81. ELEPHANTS
82. Hippos
83. Tapirs
84. Small Mammal House
85. Waterfowl Enclosure
86. Ankole Cattle
87. Emus and Cranes
88. Stork Enclosures
89. Baboon Pens
90. Cat House
91. Big Cat Enclosures
92. Antelope & Ostrich
93. Antelope Enclosure
94. Antelope Enclosure
95. Zebras
96. Zebras
97. Waterfowl Enclosure
98. Waterfowl Enclosure
99. Waterfowl Enclosure
100. Blackbuck
101. Wallabies
102. Animal Enclosure
103. Wallabies
104. Pere David's Deer Paddock
105. Llamas
105a. Llamas
106. Arabian Gazelles
107. Animal Paddock
108. Bison
109. Pere David's Deer Paddock
110. Prairie Marmots, Alpacas
111. Antelope Enclosure
112. RHINOS
113. TOILETS
114. Mpila Snack Bar
115. Antelope Enclosure
116. MONKEY HOUSE

ANIMAL FEEDING TIMES:

LIONS—3 pm except Fridays
BEARS—3-15 pm
POLAR BEARS—4 pm
SEA LIONS 3 times daily—
2-40 pm, 3-40 pm, 4-40 pm

ANIMALS MAY BE MOVED FROM TIME TO TIME

Originally the Indian Stick (*Carausius morosus*) was discovered on the Indian sub-continent at the beginning of this century. The species has become the most familiar of all phasmids and is to be found in schools and universities throughout, the world where it is used for study. This species is enormously persistent.

The Indian Stick Insect is one of the least attractive of the group. The male is extremely rare, the females being genetic with full male characteristics but sterile. The body of the adult parthogenitic female is about 75mm. in length, and is slender and wingless. Its body colour is variable but most individuals are green with red on the upper part of the leg, *i.e.*, above the "knee joint." The body is roughly cylindrical and there are no spines or other protective appendages.

After the final shedding of the skin as the insect grows, egg-laying starts from two weeks to several months. The eggs normally hatch from four to eight months after laying and need no attention. The newly emerged nymph closely resembles the adult, and sometimes the empty egg case remains attached to one of its hind legs; this either falls off as the insect moves around or is lost at the first ecdysis. There are six nymphal stages in the life of the insect and these take about five months to develop.

Not much is known of the diet of this species, but in captivity privet is taken; the Indian Stick does not take to bramble. It will however feed on a variety of other evergreens, one of them being ivy. *Carausius morosus* can be reared in almost any kind of small container, to a properly constructed cage.

BREEDING RESULTS FOR 1976

Stocktaking has been carried out as usual in the various departments, and at December 31st, 1976 the collection of mammals, birds and reptiles was estimated to consist of:

Mammals	834 specimens of 131 species
Birds	2,155 specimens of 283 species
Reptiles and Amphibians	206 specimens of 80 species
Fishes	2,400 specimens of 143 species

By courtesy of K. W. Green, A.R.P.S.

GROUP OF BENNETT'S WALLABIES (*Wallabia rufogrisea*) ENJOYING THE WINTER SUNSHINE

The following specimens were bred during the year:

MAMMALS

	No. Born	*No. Reared*	*Sex M.F*
Alpaca (*Lama pacos*)	3	2	1.1
Bear, Hybrid	3	2	2.0
Bison, American (*Bos bison*)	1	1	0.1
Blackbuck (*Antilope cervicapra*)	2	2	2.0
Blesbok (*Damaliscus dorcas*)	1	—	
Cattle, Highland (*Bos taurus*)	1	—	
Chimpanzee (*Pan troglodyte*)	3	2	2.0
Chinchilla (*Chinchilla laniger*)	1	1	1.0
Deer, Fallow (*Dama dama*)	7	6	
Deer, Pere David's (*Elaphurus davidianus*)	5	5	2.3
Deer, Formosan Sika (*Cervus nippon taiouanus*)	2	2	0.2
Eland (*Taurotragus oryx*)	1	1	0.1
Gazelle, Arabian (*Gazella arabica*)	7	4	2.2

Mammals—continued	*No. Born*	*No. Reared*	*Sex M.F*
Hippopotamus, Common (*Hippopotamus amphibius*)	1	1	1.0
Jaguar (*Panthera onca*)	1	—	
Kinkajou (*Potos flavus*)	1	1	
Kudu, Greater (*Tragelaphus strepsiceros*)	1	—	
Lechwe, Red (*Kobus leche*)	5	2	
Lemur, Ring-tailed (*Lemur catta*)	2	2	1.1
Leopard, Black (*Panthera pardus*)	1	1	1.0
Leopard, Common (*Panthera pardus*)	6	3	2.1
Llama (*Lama glama*)	1	1	1.0
Monkey, Hamadryas Baboon (*Papio hamadryas*)	4	3	2.1
Monkey, Barbary Ape (*Cercocebus torquatus atys*)	1	—	
Monkey, Capuchin (*Cebus albifrons*)	1	1	1.0
Monkey, Moloney's Guenon (*Cercopithecus albogularis moloneyi*)	1	1	0.1
Monkey, Sooty Mangabey (*Macaca sylvana*)	1	1	0.1
Nilgai (*Boselaphus tragocamelus*)	3	2	2.0
Onager (*Equus hemionus onager*)	1	1	0.1
Orang-utan (*Pongo pygmaeus*)	1	1	1.0
Prairie Marmot (*Cynomys ludovicianus*)	3	3	
Puma (*Felis concolor*)	5	5	3.2
Sheep, Soay (*Ovis aries*)	7	6	
Tiger, Bengal (*Panthera tigris*)	2	2	1.1
Wallaby, Bennett's (*Wallabia rufogrisea*)	20	15	
Wapiti (*Cervus canadensis*)	4	4	3.1
Zebra, Common (*Equus burchelli granti*)	2	1	0.1
Zebra, Grevy's (*Equus grevyi*)	1	1	0.1

BIRDS BRED DURING 1976

	No.
Avadavat, Red (*Amandava amandava*)	7
Bulbul, Black (*Hypsipites madagascariensis*)	1
Bulbul, Red-whiskered (*Pycnonotus jocosus peguensis*)	1
Bulbul, White-cheeked (*Pycnonotus leucogenys*)	1
Bulbul, Yellow-browed (*Hypsipites indicus*)	1
Cockatiel (*Nymphicus hollandicus*)	89
Cockatoo, Lesser Sulphur-crested (*Kakatoe sulphurea*)	1

Birds—continued *No.*

Conure, Crimson-bellied (*Pyrrhura rhodogaster*) 3
Conure, Lesser Patagonian (*Cyanoliseus patagonus*) 7
Conure, Nanday (*Nandayus nanday*) 7
Coot (*Fulica atra*) 2
Cordon Bleu (*Uraeginthus bengalus*) 2
Dove, Barbary (*Streptopelia risoria*) 4
Dove, Diamond (*Geopelia cuneata*) 2
Dove, Laughing (*Stigmatopelia senegalensis*) 3
Dove, Chinese Turtle (*Streptopelia chinensis chinensis*) 2
Duck, Gadwall (*Anas strepera strepera*) 1
Duck, Hybrid 2
Duck, Bahama Pintail (*Anas bahamensis*) 1
Duck, Pochard (*Aythya ferina*) 2
Duck, Wigeon (*Anas penelope*) 2
Emu (*Dromaius novae-hollandiae*) 1
Finch, Bengalese (*Lonchura striata*) 8
Finch, Cut-throat (*Amadina fasciata*) 6
Finch, Green (*Chloris chloris*) 5
Finch, Green Singing (*Serinus mozambicus*) 2
Finch, Saffron (*Sicalis flaveola*) 1
Finch, Zebra (*Taeniopygia castanotis*) 34
Goose, Bar-headed (*Anser indicus*) 4
Goose, Barnacle (*Branta leucopsis*) 1
Goose, Canada (*Branta canadensis*) 6
Guinea-fowl, Common (*Numida meleagris*) 10
Heron, Night (*Nycticorax nycticorax*) 2
Ibis, Sacred (*Threskiornis aethiopicus*) 4
Ibis, Straw-necked (*Carphibis spinicollis*) 1
Jay, Bushy-crested (*Cyanocorax melanocyanea*) 3
Java Sparrow (*Padda oryzivora*) 2
Jungle-fowl, Red (*Gallus varius*) 2
Kookaburra (*Dacelo gigas*) 2
Laughing Thrush, Black-throated (*Garrulax chinensis*) 1
Lorikeet, Green-naped (*Trichoglossus haematod micropteryx*) 1
Lorikeet, Ornate (*Trichoglossus ornatus*) 2
Lorikeet, Scaly-breasted (*Trichoglossus chlorolepidotus*) 2
Lovebird, Fischer's (*Agapornis fischeri*) 11
Lovebird, Peach-faced (*Agapornis roseicollis*) 15

Birds—continued	*No.*
Mynah, Bank (*Acridotheres ginginianus*)	1
Mynah, Jungle (*Aethiopsar fuscus*)	4
Nun, Tri-colour (*Munia malacca*)	2
Ostrich (*Struthio camelus*)	2
Parrakeet, Barraband (*Polytelis swainsoni*)	2
Parrakeet, Crimson-wing (*Aprosmictus erythropterus*)	2
Parrakeet, Derbian (*Psittacula derbyana*)	3
Parrakeet, Quaker (*Miopsitta monachus*)	10
Parrakeet, Red-rumped (*Psephotus haematonotus*)	6
Parrot, African Grey (*Psittacus erithacus*)	4
Parrot, Yellow-fronted Amazon (*Amazona ochrocephala*)	1
Parrot, Grand Eclectus (*Lorius roratus*)	1
Parrotlet, Guiana (*Forpus passerinus*)	14
Peacock, Common (*Pavo cristatus*)	6
Pheasant, Common (*Phasianus colchicus*)	3
Rail, Slaty-breasted (*Rallus striatus*)	3
Rail, Weka (*Gallirallus australis greyi*)	4
Rhea (*Rhea americana*)	1
Sibia, Black-headed (*Leioptila capistrata*)	2
Silverbill (*Euodice malabarica cantans*)	17
Spicebird (*Munia punctulata*)	3
Starling, Blue-eared Glossy (*Lamprotornis chalybaeus*)	1
Starling, Jerdon's (*Sturnus burmanicus*)	6
Swan, Mute (*Cygnus olor*)	5
Waxbill, Orange-cheeked (*Estrilda melpoda*)	4
Waxbill, Red-eared (*Estrilda troglodytes*)	2
Waxbill, Sundervall's (*Estrilda rhodopya*)	2
Weaver, Little-masked (*Ploceus luteolus*)	1
Weaver, Napolean (*Euplectes afra*)	1
Weaver, Red Bishop (*Euplectes orix*)	2
Weaver, Red-billed (*Quelea quelea*)	2
Whydah, Paradise (*Steganura paradisaea*)	1

REPTILES BRED DURING 1976

	No.
Boa Constrictor (*Constrictor constrictor*)	22
Gecko, Leopard (*Eublepharis macularis*)	18

Reptiles—continued	*No.*
Hybrid Snake	15
Python African (*Python sebae*)	2
Rattlesnake, Pigmy (*Sistrurus m. miliarius*)	3
Skink, Solomon Island (*Corucia zebrata*)	2

* * *

Admissions to the Zoo during 1976 compare favourably with those for 1975, *i.e.*, 932,258 against 921,045 in 1975. Of these 259,103 visited the Tropical House, against a figure of 225,349 the previous year. Visitors to the Aquarium also showed an increase in numbers, *i.e.*, 246,450 last year, and 219,455 in 1975.

GARDENING NOTES

Over the years, as the gardens developed, we propagated and planted many Cupressus. Although slow-growing when they are young, after three or more years these conifers soon reach maturity and enhance the beauty of any garden, especially during the winter months. Many of them have green and golden foliage. Some Cupressus may need support with a stake against strong winds until they are established.

In recent years a faster-growing conifer with the name of *Cupressocyparis leylandii* has been developed and is excellent for wind breaks and for hedges. More recently a golden variety has come along and this is named *C. leylandii* "Castlewellan." We have *C. leylandii* planted on two sides of the Sunken Garden, and hope to use this plant more elsewhere to provide windbreaks for other plants. A good point about the *Cupressus* is that they are tough and hardy, and as we saw last year, stand up to drought conditions very well. The only species which did not like the drought was *Retinospora plumosa*. These died except for those growing along the wall at the back of the rockery by the Polar Bears—we were able to keep them well watered.

Although these evergreens are mostly known as *Cupressus*

there are other groups whose names would be confusing to most people but they must be used to describe them. The two most popular golden varieties we have are *Chamaecyparis lawsoniana lutea* and *Stewartii* which can be seen growing in various parts of the zoo. These are about 15ft. high. The green one used in most parts is *Chamaecyparis lawsoniana Allumii*, also growing up to 15ft. high. We have quite a number of dwarf varieties growing on the rockeries—*Chamaecyparis lawsoniana minima aurea* grows to about 2ft. high and is globular in shape; there is also a blue-leafed form *Minima glauca*.

Two low-growing varieties are *Chamaecyparis lawsoniana tamariscifolia* and "*juniperus fitzeriana aurea*," which can be seen by the small bridges and along the stream on the rockery by the South Entrance. Also on this rockery is the *Chamaecyparis pisifera Boulevard* which has a silvery blue-green leaf growing to a height of up to 5ft. *C. pisifera plumosa Rogersii* only grows up to 2ft. with a golden yellow-coloured foliage.

Chamaecyparis obtusa '*Nana Gracillis*' has a bright, dark green leaf and is very slow to grow. One has been on the rockery by the Polar Bears for fourteen years, and is only 3ft. high. Also on the same rockery is a fine specimen of *Thuja occidentalis* '*Rheingold*,' 5ft. high, and its foliage has dark golden shades. To add to the confusion of names *Cryptomeria* '*Japonica Jundai-Sugi*' can be seen on the rockery near the South Entrance. This is dwarf-growing and compact, with irregular branching; its colour is bright green.

SUBSCRIPTIONS

New readers of the CHESTER ZOO NEWS who would like to receive the magazine regularly may be interested to know that subscription forms can be obtained from the souvenir shops. An annual subscription (12 issues) costs £2.24, postage paid, which can either be handed over the counter at the shops or posted with the completed form to the Director-Secretary, Chester Zoo, Chester.

The following notice is displayed on several boards in the grounds

Please comply with it at all times

FEEDING OF ANIMALS AND BIRDS

IT IS AN OFFENCE for any member of the public to offer food of any description to any Animal or Bird in Chester Zoo.

This regulation is made for the sake of the health of the Animals and Birds. Since the NO FEEDING rule was introduced, the number of deaths has dropped appreciably and sickness due to wrong feeding has been virtually eliminated.

What you may be offering to an animal may only be a sweet or an inoffensive piece of bread, but it can mean a death sentence for the animal. For example, a cough drop, which may relieve your cough, can cause instant death to many Animals and Birds in the Zoo.

You must not lose sight of the fact that you are only one of over a million visitors who visit the Zoo annually. If for instance an elephant had one bun from only one tenth of a day's visitors during the summer, it would eat between three and four thousand. You can guess the result.

We realise what a temptation it is for visitors, particularly children, to feed our Animals and Birds and this is why we invite members of the public to be present at the official feeding times.

This is a polite warning to you, asking you not to feed the animals. If you ignore it, the Keepers are authorised to ask you to leave the Gardens.

If you really love Animals and Birds, you will appreciate the wisdom of the ruling — No feeding by members of the public.

PLEASE HELP US TO KEEP OUR COLLECTION OF ANIMALS NOT ONLY ALIVE BUT IN FIRST CLASS CONDITION

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