CONTENTS

Editorial .......................................................... 1

Singapore records for the year:
Mammals ......................................................... 3
Reptiles .......................................................... 6
Amphibians ....................................................... 12
Freshwater fishes ................................................ 14

Peninsular Malaysian records for the year:
Mammals .......................................................... 16

by Waldtraut Bandemehr-Leonhardt and Peter Bandemehr-Leonhardt ........................................ 21

Report on the sighting of a large otter in Singapore.
by Rae Hiscock ................................................... 22

Comments on the sighting of a large otter at Sungei Buloh, Singapore, with notes on the status of otters (Mammalia: Carnivora: Mustelidae) in Singapore.
by Kelvin Lim ..................................................... 23
EDITORIAL

First of all, the editorial committee would like to apologise profusely for the very much delayed volume of 'The Pangolin' due to unforeseen circumstances. Because of the shortage of articles as well as time, the four issues for the year 1990 have been condensed into a single-volume issue. We will try to retain the four annual issues as far as possible.

The year 1990 has been an exciting one for local vertebrate records. Most notable is perhaps the presence of three bull wild elephants on Pulau Tekong, a first in Singapore's recorded history. Since the first confirmed sightings, articles on the threesome featured prominently on the local press and generated loads of public opinion on how the elephants should be treated. It was, indeed, heartening to know that (since it would not be realistic to leave the animals alone) the authorities concerned have taken the trouble to relocate the animals instead of gunning them down indiscriminately.

Large animals aside, there are also some discoveries and rediscoveries of the smaller vertebrate fauna. Noteworthy among them is the first record of a healthy population of the Black Snakehead (Channa melasoma), as well as a new genus (to Singapore) of catfish, Leiocassis in Nee Soon. Also interesting are the rediscoveries of a small toad, Pelophryne brevipes, the Bridal Snake (Dryocalamus subanulatus) and the Striped Sun Skink (Mabuya rugifera) after many decades. Before that, animals like these were thought to have become locally extinct. We are of the opinion that the dearth of records in between the past and present is directly related to the shortage (or silence?) of enthusiastic field workers and observers. Hopefully this trend of field work will continue, so that the status of local vertebrate (as well as invertebrate) fauna can be regularly monitored.

The year 1990 also saw the formation of the Nature Reserves Board, which will manage the Bukit Timah Nature Reserve and the Central Catchment Area - two key areas for local terrestrial fauna. One of our assistant editors, Mr. R. Subharaj is currently sitting on the board as an advisor representing the Malayan Nature Society. It is hoped that the NRB would greatly improve the state of our forests in controlling public misuse, and thus protecting the natural habitats of many native terrestrial fauna. We wish the NRB the best of luck in their pursuits! We would also like to congratulate the producers of a three-part documentary titled Nature in Singapore made by and aired over the Singapore Broadcasting Corporation recently, for a job well-done. This long awaited programme which features the not-so-abundant but diverse wildlife of our little country played a small but significant role in educating the general public on nature conservation.

We would also like to announce the slight rearrangement of our editorial committee. Dr. Ho Hua Chew, our former and pioneer general editor has decided to forgo his post due to his heavy involvement in conservation projects. He first mooted the idea of this bulletin, and saw it through for two years; and we greatly appreciate his immense contribution. Mr. Sutari Supari, our former art editor has also decided to retire due to the high
demand for his skills by the main MNS committee. We hope he will have a much easier life. Sutari made a number of excellent line drawings for the bulletin and did most of the cover illustrations, and we are very grateful to him.

The current editorial committee stands as follows:

General editor / Art editor

**Kelvin Lim**

Assistant editors

R. Subharaj Yeo Suay Hwee

Treasurer

Tan King Pheow

Scientific advisors

Mrs. C. M. Yang A/Prof. L. M. Chou Dr. Peter Ng

The present mailing address is:

The Pangolin

C/o Zoological Reference Collection

Department of Zoology

National University of Singapore

Kent Ridge Crescent

Singapore 0511

Finally the editorial committee looks forward to improve the quality of this publication without making it too scientific. We also encourage our readers to send their findings and general articles to us whenever possible.

Best regards,

The General editor

December 1990
SINGAPORE RECORDS FOR THE YEAR

MAMMALS

order TUPAIIDAEA
family TUPAIIIDAE

Tupaia glis Common Tree-shrew

One at Hill 56, Choa Chu Kang, 25/11 (SR); one at Bukit Batok Nature Park, 25/11 (YSH,TML); one at Jalan Kutu, Bukit Timah Nature Reserve, 23/12 (YSH,TML); one along Seletar Reservoir, 25/12 (YSH).

order CHIROPTERA
family PTEROPODIDAE

Cynopterus brachyotis Common Fruit Bat

Several caught during a series of wader ringing operation at Sungei Buloh prawn ponds between 30/10 and 3/11 (SR,YSH,KL); one seen roosting under a palm frond at the Botanic Gardens on 29/3 (SR).

Eonycteris spelaea Cave Fruit Bat

3 individuals were mist-netted (one on 30/10, 2 on 31/10) at Sungei Buloh prawn ponds (SR,JS,KL). The last recorded specimens in Singapore date as far back as 1924.

family VESPERTILLIONIDAE

Myotis muricola Whiskered Bat

One large male, apparently of this species was mist-netted at the Sungei Buloh prawn ponds on 31/10 (JS).

Scotophilus kuhlii House Bat

One possible specimen was caught in mist net at Sungei Buloh prawn ponds on 30/10 (SR).

order PRIMATA
family CERCOPITHECIDAE

Macaca fascicularis Long-tailed Macaque

An adult with young at Kampung Melayu mangroves, Pulau Ubin, 13/5 (SR); a regular troupe of over 30 individuals around the Coralarium, and one near the Maritime Museum, Sentosa, 1/8 (SR); one male near the mini-zoo, Pulau Ubin, 30/9 (YSH,TML); group of 25 near carpark of Bukit Timah Nature Reserve, 6/1 (TKP,SBS).

Macaca nemestrina Pig-tailed Macaque

A large individual reported from Seletar Reservoir Park in October (SR) is almost certainly an escapee.
Presbytis femorais  Banded Leaf-monkey

At least 8 observed between 1615-1645 hrs. on 10/3 (TML,YSH) at Nee Soon swamp-forest; 10 (including 2 sub-adults and one infant carried by adult) at Nee Soon swamp-forest, 1/4 (YSH,TML); 9 counted by TML at 11.30 am., 13 counted by YSH at about 4 pm. on 22/4 while moving through trees; 6 at Seletar Reservoir Park on 5/5 (YSH,TML); at least 6 sighted at Seletar Reservoir Park on the morning of 26/8 (sev. obs.); 2 on 15/7 at Nee Soon swamp-forest (TML,YSH); calls reported at Seletar Reservoir Park on 25/12 (YSH). The 13 individuals counted on 22/4 appear to be the largest number recorded since the monkey’s rediscovery in October, 1986

family HYLOBATIDAE

Hylobates lar  White-handed Gibbon

Gibbon calls heard near the eastern slope of Bukit Timah Hill in July are believed to be made by a caged animal of this species (YSH,TML). More interestingly, some workers have reported two tailless primates walking upright near the eastern side of Bukit Timah Hill. If these are not human, then they could be escaped gibbons.

Hylobates syndactylus  Siamang

One juvenile caught by a staff from the Jurong Bird Park on a tree outside the bird park in November is most likely an escapee from illegal animal traders.

family LORISIDAE

Nycticebus coucang  Slow loris

One reportedly caught by a villager on the northern side of Pulau Tekong between 1987 and 1988 (late entry).

order DERMOPTERA

family CYNOCEPHALIDAE

Cynocephalus variegatus  Flying Lemur

One seen clinging to a tree near the carpark of the Bukit Timah Nature Reserve on the evening of 6/10 (CYK,TML,YSH); another seen on 1/1 near the Telecons Hut, Bukit Timah Nature Reserve (see detailed report in this issue); yet another was seen by FW in flight in the same area on 24/12.

order PHOLIDOTA

family MANIDAE

Manis javanica  Malayan Pangolin

One found on a casuarina tree at Upper Peirce Reservoir in March (PT); another, apparently ‘white’ specimen was observed one morning (at 3 am.) in September, 1989 (late entry) at the Sime Road overflow canal (DC).
family SCIURIDAE

Callosciurus notatus Plantain Squirrel

One seen in mangroves at Loyang on 11/5, 5/8 (SR); one at Fort Canning Park, 16/5 (SR); one near Musical fountain, Sentosa, 3/9 (sev. obs.); one at Old Holland Road, 20/9 (SR); one at Sungei Buloh, 28/10 (sev. obs.).

Sundasciurus tenuis Slender Squirrel

Quite common at Bukit Batok Park where it co-exists with the Plantain Squirrel (YSH).

Iomys horsfieldii Horsfield’s Flying Squirrel

Unconfirmed sightings (possibly of this species) by the chief ranger of a small mammal with a long tail, about the size of a Plantain Squirrel gliding near the carpark of the Bukit Timah Nature Reserve in the early morning from October to November.

Ratufa affinis Cream-coloured Giant Squirrel

MS observed one at the Nee Soon swamp-forest in December for 20 seconds; EL recorded another from Lower Path, Bukit Timah Nature Reserve in November, which, if authenticated constitutes the first report of this species from the reserve in recent years. However, the apparent dearth of records of this species this year is rather worrisome.

family MURIDAE

Rattus tiomanicus Malaysian Wood Rat

2 very likely individuals: one at Changi Central coastal woods on 25/8 (SR); another found dead at MacRitchie forest on 30/11 (SR).

Rattus annadalei Singapore Rat

One carcass of this rat, dark grey/brown above, cream below was picked up by RH near 2.9 km, Lim Chu Kang Road on 20/6 and handed over to the ZRC.

family Ursidae

Helarctos malayanus Malayan Sun Bear

One individual was reported from Kampung Unum, Pulau Tekong, between 1987 and 1988 by villagers (late entry). Its true status (whether it swam across the Straits of Johor, or somebody’s escaped pet) remains uncertain.
family MUSTELIDAE

Lutra perspicillata Smooth Otter

A large otter seen at Sungei Buloh by RH on 21/10 appears to be of this species (see detailed report and note this issue).

Aonyx cinerea Oriental Small-clawed Otter

A 'small-sized otter' observed on 21/10 at Sungei Buloh by DY seems likely to be of this species (see note this issue).

family VIVERRIDAE

Viverra zibetha Large Indian Civet

The Sin Min Daily News dated 14/5 reports (with a picture) one individual having been trapped by a farmer near Jalan Bahar.

family FELIDAE

Panthera pardus Leopard

A black panther was regularly seen sleeping in a mangrove tree at 'Old Jetty', Pulau Tekong by villagers between 1987 and 1988. Like the Sun Bear, its status (resident, visitor or escaped pet) is uncertain.

order PROBOSCIDEA

family ELEPHANTIDAE

Elephas maximus Asian Elephant

3 bull elephants were sighted by army personnel on Pulau Tekong since 29/5. They were rounded up and transported to Malaysia the following week. This record scores a historic first for Singapore, and there have been various speculations on how and why the elephants go to the island. So far, the most likely one seems to be that the elephants, part of a small population in a patch of forest around Pengerang at the south-eastern tip of Johor threatened with logging activities, were forced by land shortage to swim across the Johor Straits in search of 'greener pastures'.

REPTILES

order SQUAMATA

family XENOPHIDAE

Xenopeltis unicolor SUNBEAM SNAKE

One, about 24 inches, crushed by vehicles at Sungei Buloh, 18/6; another 27 inch victim from a track left of Lim Chu Kang Road, 29/3 (all records from RH).
family BOIDAE

Python reticulatus  RETICULATED PYTHON

A juvenile crushed by vehicles at Upper Peirce Reservoir Road, 15/12/1989 (late entry) (YSH); YSH and TML also saw a 1 m individual at Seletar Reservoir Park on 6/5.

family TYPHLOPIDAE

Ramphotyphlops braminus  COMMON BLIND SNAKE

A 8 cm specimen appeared in an HDB apartment on the ground floor at Woodlands on 18/2 (YSH); SR identified a dead individual at Changi South Beach on 11/8.

family COLUBRIDAE

Gonyosoma oxycephala  RED-TAILED RACER

JK tentatively identified one at Sime Road forest.

Elaphe flavolineata  COMMON MALAYAN RACER

YSH identified a 1.3 m individual crushed at Old Upper Thomson Road on 15/12/1989 (late entry).

Zaocys carinatus  KEELED RAT SNAKE

A 2 m long individual spotted at the Nee Soon Swamp-forest on 24/12/1989 (late entry) (YSH); YSH and TML observed a 1.3 m snake in the Sime Road Forest on 11/2.

Ptyas korros  INDO-CHINESE RAT SNAKE

A 53 inch specimen, killed by vehicles recorded by RH at Lim Chu Kang Road on 29/3.

Xenelaphis hexagonotus  MALAYAN BROWN SNAKE

An approximately 1.7 m specimen was caught in the act of swallowing a Swamp Eel (Monopterus albus) at Seletar Reservoir, along the sandy banks of a small inlet stream on 4/5 (KL); Two observed in a stream outside the Nee Soon Rifle Range, Seletar Reservoir Park on 23/5 (PY).

Lycodon aulicus  HOUSE SNAKE

One vehicle accident victim along Lim Chu Kang Road, 29/10 (RH).

Dryocalamus subannulatus  MALAYAN BRIDAL SNAKE

YSH collected a 33 cm carcass of this apparently very rare species, crushed by vehicles at the Upper Peirce Reservoir Road along the edge of the Nee Soon Swamp-forest on 29/4.

Liopeltis baliodeirus  ORANGE-BELLIED SNAKE

One seen 2 metres up in a small tree at Upper Peirce in July by CEK.
Dendrelaphis formosus  **ELEGANT BRONZEBACK**

CMY found a dead one at Bukit Batok Park on 15/4.

Dendrelaphis caudolineatus  **STRIPED BRONZEBACK**

One male specimen was caught in a laboratory at the Kent Ridge Campus in August by QST.

Dendrelaphis pictus  **PAINTED BRONZEBACK**

One, 0.5 m, along Upper Peirce Reservoir Road, 10/3 (YSH); another, 0.7 m, at Kranji War Memorial Park on 31/1 (YSH); yet another at Sime Road, 16/10 (SR,PB); and another, about 2 ft, at West View Point, Mount Faber, 9/9 (SR).

Oligodon octolineatus  **STRIPED KUKRI SNAKE**

A 27.5 inches dead example at Neo Tiew Road on 30/6; another, 20 inch specimen, also dead, on Sealand Road, near Changi Hospital on 4/7 (all records from RH).

Ahaetulla prasina  **ORIENTAL WHIP SNAKE**

A 1.3 m vehicle accident victim at King Albert Park, Bukit Timah, on 28/1 (YSH); one at the Botanic Gardens on 29/7 (KL,SR,EL,NBC); a 4 ft snake at Nature Walk, Sentosa, on 1/12 (SR).

Ahaetulla fasciolata  **SPECKLE-HEADED WHIP SNAKE**

Police donated one to the zoo in March (FL).

Chrysopelea paradisi  **PARADISE TREE SNAKE**

One on the roof of the Chinese temple at Yishun Heronry, Sungei Khatib Bongsu on 29/9 (SR); SR also spotted one near the Musical Fountain, Sentosa, on 24/8; a 15 cm specimen at Bukit Batok Park on 25/11 (YSH).

Boiga dendrophila  **MANGROVE SNAKE**

One, about 1.5 m, seen moving across the pumping station road which separates the Upper Peirce and Lower Peirce Reservoirs on 5/5 (YSH).

Homalopsis buccata  **PUFF-FACED WATER SNAKE**

Still fairly common in the streams of the Nee Soon Swamp-forest (KL).

Cerberus rynchops  **DOG-FACED WATER SNAKE**

This tidal species is very common in prawn and fish ponds in the Sungei Buloh Bird Sanctuary, 7/11 (PN,KL,JL,NS); a dried-up specimen was found at the Yishun Heronry, Sungei Khatib Bongsu, by LKS and AS on 17/3; SR saw one in a ditch at Kampung Melayu, Pulau Ubin, on 13/5.
Xenochrophis piscator **CHEQUERED KEELBACK**

A 40 cm individual crossing a concrete path in the grounds of the Singapore Zoological Gardens at Mandai on 17/5 (5 pm) was vivid red on the sides (FL).

Xenochrophis vittatus **STRIPED KEELBACK**

Several individuals were caught by tropical fish farmers from their farms at Lim Chu Kang in March (KL,FL); RH found a dead specimen at the junction of Neo Tiew Road and Jalan Gemala, Lim Chu Kang, on 20/9.

family **ELAPIDAE**

*Maticora intestinalis* **BANDED CORAL SNAKE**

One, 0.5 m, dead along Upper Peirce Reservoir Road, 1/4 (TML,YSH); one, very small, in drain at Kent Ridge on 17/8 (KL,PN); SR found a 1.5 ft dried snake at the junction of Sime Road and Lornie Road on 7/8; an 8 inch dead one on a track at the end of Choa Chu Kang Road on 25/12 (SR).

*Naja sumatrana* **BLACK SPITTING COBRA**

2 at Punggol Farmway 1: one, 4 ft, on 21/10 (NBC,PB,SR); the other, 3 ft, killed by grass-cutter on 21/11 (SR). RH also saw a 4-5 ft. individual along the Sime Road pipeline on 27/3.

family **HYDROPHIIDAE**

*Aipysurus eydouxii* **MARBLED SEA SNAKE**

One dead specimen at Kampung Bahru Beach, Pulau Ubin on 12/11 (KL,PN,NS).

family **VARANIDAE**

*Varanus salvator* **COMMON WATER MONITOR**

A 6 ft individual seen near the Coralarium, Sentosa, by SR on 12/11.

family **SCINCIDAE**

*Mabuya multifasciata* **COMMON SUN SKINK**

Regularly sighted at Sungei Buloh Bird Sanctuary (SR).

*Mabuya rugifera* **STRIPED SUN SKINK**

One small specimen was found in the Nee Soon Swamp-forest on a grassy path on 30/4 by KL,KY and PN; a larger, 8 inch individual was observed among twigs and tangled branches on the forest floor along Hampstead Hut Path, Bukit Timah Nature Reserve on 22/11 by SR and EL. This rare skink is easily recognised by four yellowish stripes on the dorsum.
Dasia olivacea **OLIVE TREE SKINK**

An injured example of this rare arboreal lizard was found in a concrete drain near the entrance of the Bukit Timah Nature Reserve on 8/4 (KL,KY).

**Riopa bowringi** **GARDEN SUPPLE SKINK**

HWH recorded one on the wall of a canal at Changi North Beach on 27/1.

**Lygosoma sp.** **SUPPLE SKINK**

Resembles the common Garden Supple Skink in size and appearance at first glance, but closer inspection reveals that it has a much longer body and shorter legs. The overall body colouration is also different. The exact identity (even the genus) is yet to be confirmed. One specimen was collected along the grassy bank of a stream in the Nee Soon Swamp-forest on 30/4 by KY and PN. Another was found earlier, on 28/12/1989 (late entry) by KL at the same spot (specimens deposited at the ZRC). This, along with the Striped Sun Skink and the Malayan Bridal Snake once again prove that the Nee Soon Swamp-forest still has many more surprises in store.

**Family GEKKONIDAE**

**Gekko monarctus** **SPOTTED HOUSE GECKO**

HKL reports one in a house along Hindhede Drive on 20/2.

**Geodyra mutilata** **FOUR-CLAWED GECKO**

One on pipeline at night, in the Nee Soon Swamp-forest, on 14/11 (KL,PN).

**Cnemaspis kendalli** **DUCK-FACED GECKO**

One on a brick wall at Jungle Fall Valley, Bukit Timah Nature Reserve on 28/8 (PN,KL,NS,JL,KN).

**Cyrtodactylus quadrivirgatus** **MARBLED FOREST GECKO**

One on a tree trunk at the Nee Soon Swamp-forest on 14/11 (KL,PN); another on 23/11 (PN).

**Family AGAMIDAE**

**Bronchocela cristatella** **GREEN TREE LIZARD**

CMY found a dead one at Bukit Batok Nature Park on 15/4; a small example at Jalan Kutu, Bukit Timah Nature Reserve, on 9/5 (LKS,AS); one on Sentosa, 20/8 (SR, LG).
Calotes versicolor  CHANGEABLE LIZARD

Seen at the following places: Westlake Park, 30/1 (YSH,TML); summit of Bukit Timah Hill, Bukit Timah Nature Reserve, a male in breeding colours, 9/5 (LKS,AS); Island Country Club, Sime Road, one on a fence, 7/8 (SR); Fort Road, 26/8 (HWH).

order CROCODYLIA
family CROCODYLIDAE

Crocodylus porosus  ESTUARINE CROCODILE

A small example, about one metre in length was spotted at the Sungei Buloh Bird Sanctuary’s prawn ponds by JS in November, 1990.

order TESTUDINES
family EMYDIDAE

Trachemys scripta elegans  RED-EARED SLIDER

One in a pond near the Roller Skating Rink, Sentosa on 25/7 and 1/8; records also from the Sime Road pond on 7/8 and from Marina South 31/8 (all records by SR).

Siebenrockiella crassicollis  BLACK MARSH TURTLE

Common at Seletar Reservoir, and many specimens had red paint on their carapace, suggestive of their introduced origins (KY,KL), 4/5.; CMY found a dead individual at Seletar Reservoir on 11/3.

Cuora amboinensis  MALAYAN BOX TURTLE

A single example found along a stream in the Nee Soon Swamp-forest on 30/3 (CMY,KY,KL,YKL).

Notochelys platynota  MALAYAN FLAT-SHELLED TURTLE

A large specimen from Seletar Reservoir (KY) on 4/5; another one from the Pasir Laba Military Exercise Area in early 1990, along with sightings of two hatchlings in a stream in the same area by an army personnel.

family CHELONIIDAE

Eretmochelys imbricata  HAWKBILL TURTLE

A 1.2 m individual found dead on north beach, Sentosa on 3/11 (SR,LG) had a badly crushed carapace. It has since been washed away by the tide.

family TRIONYCHIDAE

Amyda cartilaginea  MALAYAN SOFT-SHELL TURTLE

One in a stream at the Seletar Reservoir Park on 25/10 (PN,KL,PY,JL,KN); and another in a shallow pool in the Nee Soon Swamp-forest on 21/4 (KL,KY,PN,YKL).
Lissemys punctata **INDIAN FLAP-SHELL TURTLE**

A set of carapacial bones belonging to this Indian species found on the bank of the Seletar Reservoir on 4/5 by KY (see Yong, 1990 for details).

**AMPHIBIANS**

*order ANURA*

family **PELOBATIDAE**

*Megophrys nasuta* **HORNED TOAD**

A large female, about 12 cm snout-vent length encountered by KL in the Nee Soon Swamp-forest on 30/10.

*Leptobrachium nigrops* **BLACK-EYED TOAD**

Records from Lower Peirce Reservoir, 13/7, and the Nee Soon Swamp-forest, 29/9 (KL).

family **BUFONIDAE**

*Bufo melanostictus* **COMMON ASIAN TOAD**

A small example with reddish warts on the dorsum, usually atypical of the Singapore forms (but present on Javan toads), from the Lower Peirce Reservoir, 11/8 (KL).

*Bufo quadriporcatus* **FOUR-RIDGED TOAD**

LKS reported one from the Sime Road forest on 1/2; while males were heard calling, and four were seen in the Nee Soon Swamp-forest on 29/9 (KL).

*Ichthyophis cf. paucisulcus* **YELLOW-BANDED CAECILIAN**

One example, about 10 cm long, dark brown with a distinct dusky-yellow stripe on its side was seen moving among submerged leaf-litter in a shallow stream (depth of about 4-5 cm) in the Nee Soon Swamp-forest by KL on 7/9. This constitutes the first known record of these worm-like amphibians from this locality in the recent years. There has been two other recent records from the Bukit Timah Nature Reserve. At a glance, the caecilian may be mistaken for the swamp leech, which is quite common in forest streams. However, they can be easily told apart by the different modes of locomotion, and the shape. The caecilian tends to slither, and retain its serpentine, cylindrical shape throughout, whereas the leech stretches itself thin and long, then pulls its body into a blob, thereby changing the body shape each time it moves. The caecilian also has visible eyes while the leech lacks these.
Pelophryne brevipes **SAINT ANDREWS' CROSS TOAD**

From Fern Valley, Bukit Timah Nature Reserve, one was found by DHM on 21/11/1989; and another by NKH on 16/12/1989 (late entry).

**family RANIDAE**

**Rana baramica** **LITTER FROG**

A male seen calling from the forest litter along a track in the Nee Soon Swamp-forest on 23/11 by KL and PN.

**Rana blythii** **MALAYAN GIANT FROG**

Two seen by KL at the bend of a stream in the Nee Soon Swamp-forest on 8/8.

**Rana malesiana** **MALESIAN FROG**

Two records from the Nee Soon Swamp-forest, viz., 23/11 (KL,HKL) and 30/3 (KL,KY). One from the Pasir Laba Military Exercise Area (JL,KN), 26/12.

**Rana paramacronon** **COARSE FROG**

Fairly common in the Nee Soon Swamp-forest.

**Rana plicatella** **RHINOCEROS FROG**

A male example found at the Nee Soon Swamp-forest by JK and KL on 23/11.

**Rana cancrivora** **CRAB-EATING FROG**

Several records from various habitats: pond at the Institute of Education, (KY,YKL) 4/4; monsoon drain along Cluny Road (KL), 24/3; Sungai Buloh prawn ponds where they inhabit brackish water (JS,KL) in July and November; forest stream in the Pasir Laba Military Exercise Area (JL,KN), 26/12; Lim Chu Kang mangroves (NS,KL); and Lower Peirce Reservoir (KL), 11/8.

---

**Malayan Bridal Snake**

*Dryocalamus subannulatus*
FRESHWATER FISHES

family CYPRINIDAE

Puntius conchonius  ROSY BARB

One seen associating with Common Barbs (Puntius binotatus) at Sime Road Forest on 17/4 (KL,KY,YKL); another example found on 20/4 (KL,KY,YKL,CMY) in the same locality. The Rosy Barb hails from the Indian subcontinent, and is a popular aquarium fish.

Puntius partipentazona  FIVE-BANDED TIGER BARB

Very common in the Lower Peirce Reservoir along the grassy edges.

Puntius johorensis  SIX-BANDED TIGER BARB

Appears to have become rather rare, possibly due to illegal collecting. All records from the Nee Soon Swamp-forest on 14/4 (KL) and 23/9 (YSH,TML).

Puntius lateristriga  SPANNER BARB

YSH reports two specimens from a stream draining into the Seletar Reservoir on 1/5 and 6/5.

Rasbora einthovenii  EINTHOVEN'S RASBORA

Present in small numbers in a stream in the Pasir Laba Military Exercise Area on 26/12 (KL,PS,JL).

Rasbora bankanensis  BANKA RASBORA

Five observed on 1/5 and one on 6/5 in a stream draining into the Seletar Reservoir by YSH and TML, would, if authenticated, be the first sightings of this species since the 1960s.

Rasbora borapetensis  RED-TAILED RASBORA

Very common in a stream at Seletar Reservoir Park (KL,PN), 25/10.

family BAGRIDAE

Leiocassis sp.  BUMBLEBEE CATFISH

A juvenile specimen was found in the Nee Soon Swamp-forest on 12/1 by PY. This is the first record of any member of the genus Leiocassis from Singapore.

family ANABANTIDAE

Anabas testudineus  CLIMBING PERCH

Present in some numbers in a pond at the Nee Soon Swamp-forest, 14/4 (KL,PN).
family CHANNIDAE

Channa melasoma  BLACK SNAKEHEAD

First recorded in December, 1989, the presence of this species in Singapore has been confirmed by specimens obtained from the Nee Soon Swamp-forest in March (PN, KL, KY). Since then, regularly observed in that locality (see Ng & Lim, 1990). YSH and TML reported a pair with about 20 young from the same locality.

Channa gachua  DWARF SNAKEHEAD

Regularly observed in the Nee Soon Swamp-forest throughout the year (KL, PN).

family NANDIDAE

Nandus nebulosus  LEAF-FISH

Two juveniles from streams in the Sime Road forest: one on 17/4 (KL), the other on 20/4 (KY).

family CHANNIDAE

Parambassis punctulatus  GLASSFISH

Abundant in the Lower Peirce Reservoir (KL). The origin of this species (described from Pahang, Malaysia) remains a mystery, but it is widely believed to have been deliberately introduced.

family Gobiidae

Gobiopterus cf. brachypterus  GLASS GOBY

Swarms of this tiny, transparent goby hover in midwater over granite boulders along the edges of the Tengeh Reservoir on 26/12 (KL, JL, CMY). This estuarine species seems to be doing very well despite having been trapped in freshwater since the damming up of the Sungei Tengeh.

family ELEOTRIDIIDAE

Oxyeleotris marmorata  MARBLED SLEEPER-GOBY

A large specimen was encountered in a forest stream in the Nee Soon Swamp-forest on 21/4 (PN, KL, KY, YKL).
PENINSULAR MALAYSIAN RECORDS FOR THE YEAR

MAMMALS

order TUPAIIOIDEA

family TUPAIIDAE

Tupaia minor   Lesser Tree Shrew

4 separate individuals sighted along jungle trails near Kota Tinggi waterfall, 4/3 (YSH,TML).

order INSECTIVORA

family GYMNURIDAE

Hylomys suillus   Lesser Gymnure

One seen at Bishop’s trail, Fraser’s Hill, 3/6 (SR).

order CHIROPTERA

family PTEROPODIDAE

Pteropus hypomelanus   Island Flying Fox

All sightings, possibly of this species, on Pulau Tioman. 2 dead on bare electric wire, 30/6 (YSH); and about 50 seen flying and feeding on fruits of the sea almond tree on 1/7 (YSH).

Pteropus vampyrus   Large Flying Fox

One possible individual seen hanging dead from a bare electric cable between Air Hitam and Batu Pahat on 20/7 (YSH,TML).

Cynopterus brachyotis   Common Fruit Bat

17 possible individuals roosted under the roof of a chalet in Desaru on 13/5 (TML,YSH).

family EMBALLONURIDAE

Emballonura monticola   Lesser Sheath-tailed Bat

A small group of bats found roosting under a large boulder off the Kota Tinggi-Kuantan Highway (20 km. off Kota Tinggi), Johor, have been tentatively identified from photographs to be of this species, 26/5 (MS).

family VESPERTILIONIDAE

Kerivoula picta   Painted Bat

One specimen found at the Merlin Hotel, Fraser’s Hill on 16/7 by DY and SR, appears to be the second record of this very poorly-known species for Peninsular Malaysia.
order PRIMATA

family CERCOPITHECIDAE

Macaca fascicularis Long-tailed Macaque
6 near golf course at Malacca Village Resort, 21/7 (TML,YSH); 15 at Monkey Bay, Pulau Tioman in September (PS).

Macaca nemestrina Pig-tailed Macaque
A troupe of about 23 photographed at Gunung Pulai, Johor, 4/2 (HHC,SBS,TKP); 4 seen crossing road near Muntahak trail, Johor, 17/10 (YSH,TML); one seen on 26/6 low in trees along a trail and another at the edge of the road on 29/6 along the Kota Tinggi-Kuantan Highway (20 km. off Kota Tinggi), Johor (MS); one adult at Pasoh forest, Negri Sembilan, 9/7 (SR).

Presbytis obscura Dusky Leaf-monkey
7 observed feeding on figs in a fig tree along road to Fraser’s Hill on 2/4 (SBS); One adult with young seen foraging at ground level in the former Johor Safari Park, 13/11 (YSH); 4 in secondary forest outside Malacca Zoo, Malacca, 21/7 (YSH,TML); a small troupe along The Gap road, Fraser’s Hill, 30/5 (SR); one at Muntahak logging trail on 27/12 (EL,LG,MS,SR).

Presbytis femoralis Banded Leaf-monkey
18 along Telecoms Loop, Fraser’s Hill, 2/4 (SBS); calls heard at Kota Tinggi waterfall, 13/4 (TML,YSH); A dark-phased individual off Kota Tinggi-Kuantan Highway (20 km. from Kota Tinggi), Johor, on 26/6 (MS).

family HYLOBATIDAE

Hylobates lar White-handed Gibbon
Calls heard at Gunung Pulai, 4/2 (SBS,HHC,TKP); one at Kota Tinggi waterfall, 13/4 (TML,YSH); calls heard at Desaru, 13/5 (TML,YSH); and calls heard again at the former Johor Safari Park, 17/5 (YSH,TML); one seen off Teresek Trail, Taman Negara, 13/3 (MS); two moved through canopy off Kota Tinggi-Kuantan Highway (20 km. from Kota Tinggi), Johor, on 29/6 (MS); one at Muntahak logging trail, Johor, 27/12 (SR).

Hylobates syndactylus Siamang
One seen sleeping in the canopy of tall trees at Fraser’s Hill on 2/6 (MS); 4 adults, one juvenile on Bishop’s trail, Fraser’s Hill, 28/5 (SR); A family troupe along The Gap road, Fraser’s Hill, 17/7 (SR).

family LORISIDAE

Nycticebus coucang Slow Loris
2 at Kampung Selang, Pulau Tioman in September (PS); one found dead and rotting on an electric cable, at Telecoms Loop, Fraser’s Hill, 26/5 (SR).
Manis javanica Malayan Pangolin

One road accident victim near Kota Tinggi, 12/5 (TML,YSH); one on Pulau Tioman in September (PS); another road accident victim near Air Hitam, Johor, 20/7 (TML,YSH); 2 more road victims, one at Kulai town, the other between Air Hitam and Batu Pahat on 22/7 (TML,YSH).

order RODENTIA
family SCIURIDAE

Callosciurus nigrovittatus Black-banded Squirrel
3 at Muntahak trail, Kota Tinggi on 9/9 (TML,YSH); one on Gunung Pulai, Johor, 24/6 (SR).

Callosciurus prevostii Prevost’s Squirrel
One seen off Tahan trail, Taman Negara, 14/3 (MS); another seen at Muntahak trail, Kota Tinggi, 9/9 (TML,YSH); one seen at Pasoh forest, Negri Sembilan, 8/7 (SR).

Sundasciurus lowii Low’s Squirrel
An individual at the main headquarters, Pasoh forest, Negri Sembilan, 8/7 (SR).

Dremomys rufigenis Red-cheeked Ground Squirrel
One along Bishop’s trail, Fraser’s Hill, 17/7 (SR).

Ratufa affinis Cream-coloured Giant Squirrel
One at Muntahak trail, Kota Tinggi, 9/9 (YSH); another fed in fruiting tree off the Kota Tinggi-Kuantan Highway (20 km. off Kota Tinggi), Johor in June (MS).

Ratufa bicolor Black Giant Squirrel
One in tree along Telecoms Loop, Fraser’s Hill, 2/4 (LKS,MC,AS,NBC,SBS); one near Jeriau waterfalls, Fraser’s Hill, 3/4 (SBS); one foraging almost at ground level on western side of Pulau Tioman, 1/7 (YSH); one at Monkey Bay, Pulau Tioman, in September (PS); one, again at Telecoms Loop, Fraser’s Hill, 26/5 (SR); 2 along The Gap road, Fraser’s Hill, 17/7 (SR).

order CARNIVORA
family VIVERRIDAE

Viverra tangalunga Malay Civet
One at Yong Hide, Taman Negara, on the night of 13/7 (SR).
**Herpestes urva**  Crab-eating Mongoose

A large individual observed crossing the road at Telecoms Loop, Fraser’s Hill, on 2/6 (KL,AS,EL,NBC).

**family MUSTELIDAE**

**Aonyx cinerea**  Oriental Small-clawed Otter

One probable specimen seen at dusk near Sungei Tahan, Taman Negara, 13/3 (MS); 7 walked across forest trail near a swampy patch off the Kota Tinggi-Kuantan Highway (20 km. off Kota Tinggi), Johor, in June (MS); One on a dirt track to Gunung Pulai, Johor on 24/6 (HHC,SR,LKW).

**Martes flavigula**  Yellow-throated Marten

2 observed running off Kota Tinggi-Kuantan Highway (20 km. off Kota Tinggi), Johor, with tails lifted high off the ground, 29/6 (MS).

**family FELIDAE**

**Felis bengalensis**  Leopard Cat

One seen crossing road while driving through a rubber estate in Johore at 3 am. on 7/6 (MS).

**order PERISSODACTYLA**

**family TAPIRIDAE**

**Tapirus indicus**  Malayan Tapir

One observed from Kumbang Hide, Taman Negara, feeding nearby between 4 to 6 am. on 16/3 (MS).

**order ARTIODACTYLA**

**family TRAGULIDAE**

**Tragulus javanicus**  Lesser Mousedeer

One ran across Teresek trail at dawn on 13/3 (MS); another at Kumbang-Sungai Tembeling trail on 16/3 (MS).

**family CERVIDAE**

**Muntiacus muntjak**  Barking Deer

A lone individual along the Tahan trail, Taman Negara, 12/7 (SR).

**family SUIDAE**

**Sus scrofa**  Wild Pig

2 ran for cover along trail on 29/6, and about 5 fed at the forest edge (15/8), off and along the Kota Tinggi-Kuantan Highway (20 km. off Kota Tinggi), Johor (MS); one near Mentakab Bungalow, Fraser’s Hill, 28/5 (SR).
## LIST OF CONTRIBUTORS

<table>
<thead>
<tr>
<th>AS</th>
<th>Agnes Sng</th>
<th>CMY</th>
<th>Yang Chang Man</th>
<th>CYK</th>
<th>Chan Yoke Keng</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC</td>
<td>David Chin</td>
<td>EL</td>
<td>Elizabeth Low</td>
<td>FL</td>
<td>Francis Lim</td>
</tr>
<tr>
<td>HHC</td>
<td>Ho Hua Chew</td>
<td>HKL</td>
<td>H. K. Lua</td>
<td>HWH</td>
<td>Ho Wai Hoong</td>
</tr>
<tr>
<td>JK</td>
<td>Joseph Koh</td>
<td>JL</td>
<td>Jeffrey Lee</td>
<td>JS</td>
<td>Jonathan Smith</td>
</tr>
<tr>
<td>NKH</td>
<td>Ng Kwee Hoon</td>
<td>FW</td>
<td>Felix Wong</td>
<td>KL</td>
<td>Kelvin Lim</td>
</tr>
<tr>
<td>KN</td>
<td>Kang Nee</td>
<td>KY</td>
<td>Kenneth Yong</td>
<td>LG</td>
<td>Lyndon Gan</td>
</tr>
<tr>
<td>LKC</td>
<td>Lim Kim Chuah</td>
<td>LKS</td>
<td>Lim Kim Seng</td>
<td>LKW</td>
<td>Lee Kok Wee</td>
</tr>
<tr>
<td>MC</td>
<td>Maggie Chong</td>
<td>MS</td>
<td>Morten Strange</td>
<td>NBC</td>
<td>Ng Bee Choo</td>
</tr>
<tr>
<td>PB</td>
<td>Pam Burgess</td>
<td>PN</td>
<td>Peter Ng</td>
<td>PSL</td>
<td>Paul Sweet</td>
</tr>
<tr>
<td>PT</td>
<td>Patrick Tan</td>
<td>PY</td>
<td>Patrick Yap</td>
<td>QST</td>
<td>Quek Swee Tiag</td>
</tr>
<tr>
<td>RH</td>
<td>Rae Hiscock</td>
<td>SBS</td>
<td>Sutari Supari</td>
<td>NS</td>
<td>N. Sivasothi</td>
</tr>
<tr>
<td>SR</td>
<td>R. Subharaj</td>
<td>TKP</td>
<td>Tan King Pheow</td>
<td>TML</td>
<td>Tan Mei Ling</td>
</tr>
<tr>
<td>YKL</td>
<td>K. L. Yeo</td>
<td>YSH</td>
<td>Yeo Suay Hwee</td>
<td>DHM</td>
<td>D. H. Murphy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CEK</td>
<td>E. K. Chua</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## REFERENCES


REPORT ON THE SIGHTING OF A FLYING LEMUR (*Cynocephalus variegatus*) IN THE BUKIT TIMAH NATURE RESERVE

by

Waldtraut Bandemehr-Leonhardt & Peter Bandemehr-Leonhardt

We saw a Flying Lemur on January 1, 1990 at 1620 hrs. at the Bukit Timah Nature Reserve. The animal, looking like a termite's nest, was clinging to a tree about 10 metres from the paved road, very near the junction where one part of the road goes to the top, and the other one to Telecoms. It was about six metres above the ground, with thick red fur. One could distinguish the hook-like claws on its front legs with which it was clinging on to the tree. The face was small with greyish markings around the eyes and the teeth showing at the snout (or at least that was what it looked like). It moved its head very slowly.

Despite having no binoculars, we still managed to record it on video. The shots are not terribly good due to the humidity, and the dense foliage, which made focussing difficult. The fur seemed somewhat 'moth-eaten' to us, and we thought the animal was sick. It was to prove us wrong. We asked some passing Swiss nationals to take pictures of the animal, which they did, and also promised to send the pictures to us. They moved in too close to the animal and it started to move up the tall tree in vigorous jumps. Finally, at a high enough elevation, it sailed into the bushes. We asked the people not to follow it. We were quite astonishing by the fact that this flying lemur was found so close to the paved road, which was unusually busy that particular day.
A large otter was seen on 21 October, 1990 by the author, Douglas Ong, Rudy Hew and Robert Ong at the Sungei Buloh Bird Sanctuary, at the north-western coast of Singapore Island. The time was approximately 1745 hrs; exact location, the muddy shore of Sungei Buloh Kechil on the western side of Pulau Buloh (see fig. 1); the tide, almost out; and the weather, with overcast sky, just after heavy rain. The animal was about 100 to 125 metres away, and was observed for several minutes through a 20 X 60 KOWA telescope set up on a tripod.

The animal was at first mistaken for a large monitor lizard (Varanus salvator) sliding down the slight tidal incline face-on to us. The otter seemed to be aware of our presence for it would often lift itself up on its front legs and look over at us. However, it was mainly preoccupied with wriggling along on all four limbs on the mud, gain some speed, then let go its fore limbs, and slide on its belly. It appeared to be doing this for amusement rather than as a means of travel. It was still engaged in this form of activity when we left the scene.

Descriptions of the otter are as follows: Body length about 3 feet, tail length about 18 to 24 inches. General colour on face, head, back, sides, limbs and tail, blackish; fawn on the front of the neck and breast area. The rest of the underside was too muddy to decipher the colour. The fur was wet and appears like a covering of black, shiny scales. Face appeared rounded from the side, and when viewed face-on, seemed flat; front of face black, with very big, black eyes, and large, sagging mouth; whiskers could be seen on both sides of the face; ears not noted, must have been small. Neck about the same width as head, long, taper out towards the shoulders. Body slimmer at shoulders, much heavier at the hind quarters. Feet appeared flattish, like large flippers; no sign of wrists, hands, or webbed fingers; rear feet appeared heavier than front. Tail stout and triangular, very heavy where it joined the hind area, then tapered off.
COMMENTS ON THE SIGHTING OF A LARGE OTTER
AT SUNGEI BULOH, SINGAPORE, WITH NOTES ON THE STATUS OF
OTTERS (MAMMALIA: CARNIVORA: MUSTELIDAE) IN SINGAPORE

by Kelvin K. P. Lim

Abstract: The large otter recently observed at the Sungei Buloh
Bird Sanctuary is thought to be a Smooth Otter (Lutra
perspicillata). If authenticated, it would be the second record
of this species in Singapore. Problems in the proper
identification of the animal in the field are outlined.

Three species of otters have been reported from Singapore
and its offshore islands, viz. the Oriental Small-clawed Otter,
Aonyx cinerea (Illiger, 1815); the Hairy-nosed Otter, Lutra
sumatrana (Gray, 1865); and the Smooth Otter, Lutra (Lutrogale)
perspicillata Geoffroy, 1826. In recent years, however, there
have only been unconfirmed reports of the Oriental Small-clawed
Otters, the other two larger species were until recently, thought
to be extinct, or having doubtfully occurred (Yang et al.,
1990:13,20). The sighting made by Hiscock (1990) at the Sungei
Buloh Bird Sanctuary confirms the presence of a large otter
species here, despite Foster-Turley & Santiapillai’s (1990:61)
belief that "... all species of otter in Singapore are now ...
extirpated’. Based on the rather detailed descriptions provided,
the individual is believed to be a Smooth Otter (Lutra
(Lutrogale) perspicillata). If the identification is correct,
this would then be the second record of this species in
Singapore. The first record is of a male collected from Lazarus
Island, to the south of Singapore island in 1938. The skin of
which is currently deposited at the Zoological Reference
Collection, Department of Zoology, National University of
Singapore. Another likely candidate, the Hairy-nosed Otter
(Lutra sumatrana) was last recorded in 1909 (Yang et al., 1990:
13).

Fig. 1. Map of Singapore showing some locations of otter
sightings. a. Sungei Buloh; b. Choa Chu Kang; c. Pulau Tekong; d.
Lazarus Island.
The exact identity of the Sungei Buloh otter is quite difficult to ascertain for ‘hard’ distinguishing characters were not noted despite the detailed descriptions. It is most likely to be one of the two Lutra species, due to the much larger size, and the webbed feet. The Oriental Small-clawed Otter is smaller (under HB 55 cm), with a relatively shorter body, and less complete webbing on the feet (Lekagul & McNeely, 1988:534-535).

Among the two Lutra species however, the Smooth Otter (Lutra (Lutrogale) perspicillata) is believed to be the more likely candidate due mainly to the larger size, which ranges within HB 655-790, T 406-505, TL 1067-1300. The Hairy-nosed Otter (Lutra sumatran), although generally smaller, displays an overlap in size (HB 500-820, T 350-500, TL 1050-1330), such that the largest specimen, a male recorded in Medway (1983:87) is larger (HB 825, T 508) than any of the local Smooth Otters. [Size measurements fide CITES (1983): HB (head-body length), T (tail length), TL (total length); all measurements in mm]

The Smooth Otter is generally believed to be much more common than the Hairy-nosed Otter; the latter species being the "... least known of the Asian otters and ... also the most difficult to identify in the field" (Foster-Turley & Santipillai, 1990:53). Burton & Pearson (1987:142) claim that the Hairy-nosed Otter "... is still widespread and abundant over most of its range", which probably is an overstatement. Therefore it is logical to assume that there is a much higher chance of seeing the Smooth Otter, but this should never be used as a criteria for determining identity.

The key external characters normally used to separate the two Lutra species are summarised [fide CITES (1983), Lekagul & McNeely (1988), Payne et al. (1985)] as follows:

<table>
<thead>
<tr>
<th>Smooth Otter</th>
<th>Hairy-nosed Otter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lutra (Lutrogale) perspicillata</td>
<td>Lutra sumatran</td>
</tr>
<tr>
<td>nose pad not covered with hair (Fig. 2a)</td>
<td>nose pad covered with hair (Fig. 2b)</td>
</tr>
<tr>
<td>fur smooth and sleek</td>
<td>coarser fur</td>
</tr>
<tr>
<td>tail flattened on underside</td>
<td>tail oval in cross-section</td>
</tr>
<tr>
<td>head less flat in profile, muzzle shorter, larger eyes (Fig. 3a)</td>
<td>head more flat in profile, muzzle longer, eyes smaller (Fig. 3b)</td>
</tr>
<tr>
<td>raw umber to smokey gray-brown above; lighter, drab colour below</td>
<td>very dark brown above, slightly paler below, sharp demarcation of two colour tones on side of neck</td>
</tr>
</tbody>
</table>

Of the characters listed, the most important one has not been noted, namely the presence or absence of hair on the nose [see also Fig. 2c for nose pad of the Eurasian Otter]. The cross section of the tail, and also the fur texture were also not
noted. The seemingly flat face, suggestive of a shorter muzzle and a less flat skull profile, and 'very big black eyes' (Hiscock, 1990) could point to the Smooth Otter. However, these are but speculations, and therefore not concrete. In terms of colour, the 'blackish' used in the descriptions would suit the dark brown colour of the Hairy-nosed Otter when the fur is wet and seen under an overcast sky; but Lekagul & McNeely (1988:554) state that the Smooth Otter has the same colour as the Hairy-nosed Otter. The author has examined several skins held at the Zoological Reference Collection, Department of Zoology, National University of Singapore and found that the Smooth Otter tends to be lighter in colour, as previously mentioned. Therefore, colour does not seem to be a very reliable field character.

There are records of otters displaying the characteristics of both the Hairy-nosed Otter and the Eurasian Otter (Lutra lutra), indicating that the two species might interbreed (CITES, 1983). This poses a problem in otter taxonomy, for if this were to hold true, then the Hairy-nosed Otter would probably not qualify as a full species, but possibly a subspecies of the Eurasian Otter. Then again, there are suspicions that the Southeast Asian form of the Eurasian Otter, Lutra lutra barang F. Cuvier, 1823, may, after all, be a distinct species (P. J. H. van Bree pers. comm.).

Fig. 2. Nose of Lutra otters; a. Smooth Otter, b. Hairy-nosed Otter, c. Eurasian Otter (after CITES, 1983).

Fig. 3. Side profile of otter skulls (after Payne et al., 1985:279); a. Smooth Otter, b. Hairy-nosed Otter.
The possibility of the Eurasian Otter occurring in Singapore should not be disregarded as the species has been recorded on Pulau Langkawi, off the coast of Kedah, Peninsular Malaysia (Medway, 1983:87) to the north; Sumatra to the west and Java to the south and south-east (Lekagul & McNeely, 1988:551). Although Lekagul & McNeely (1988:551) state that this species is found in the mountains in Thailand, it is also found in the mangroves, and in peatswamp forest on Sumatra (Foster-Turley & Santiapillai, 1990:57). The Eurasian Otter is very similar to the Hairy-nosed Otter in most respects, but distinguishable by the hairless nose (Fig. 2c). It can be separated from the Smooth Otter by the coarse, grizzled coat, and the circular cross-section of the tail (see Medway, 1983:87; Lekagul & McNeely, 1988:551; CITES, 1983).

It is certain that otters still occur on Singapore, but probably in very small numbers. The main problem lies in the correct identification of the two larger species. There have been other recent unconfirmed reports of otters from Pulau Tekong by national servicemen, and from Choa Chu Kang, as well as from the Central Catchment Area (Anon, 1988a, 1989b; Yang et al., 1990) [see Fig. 1]. Prawn pond farmers at Sungei Buloh seem to be quite familiar with otters. According to the farmers, otters (known to them in the Teochew vernacular name "Chwee Tua") are rarely seen in the area, but definitely occur. On 21 October, 1990 (same day as Hiscock’s sighting), a "small" otter was seen by Mr. Dennis Yong in the same area. The observer believes it to be an Oriental Small-clawed Otter, but did not provide detailed descriptions, nor note the exact locality where the animal was sighted. The author is of the opinion that it is possible for more than one otter to be seen that day in the same area, and it is also highly possible that more than one species was seen. Both the Smooth Otter and the Oriental Small-clawed Otter are known to be sympatric; the former, larger species feeding mainly on fish, while the latter, on crustaceans and molluscs (see eg. Lekagul & McNeely, 1988:561).

It is not known whether the animals are resident in the reserve or visitors from across the Johor Straits. Nevertheless, the confirmed presence of otters (although rare) in the Sungei Buloh Bird Sanctuary would further boost the conservation value of this reserve, not only for birds, but also of other wetland and mangrove organisms (otters included).

Acknowledgements:

The author thanks Mr. Rae Hiscock for his detailed description of the animal he saw; to Dr. P. J. H. van Bree of the Instituut voor Taxonomische Zoologie, Universiteit van Amsterdam, Amsterdam, for the useful discussions. To Peter Ng, for sharing all his otter literature and reading the manuscript, and Mrs. C. M. Yang for opportunity to examine the otter skins in the ZRC. Thanks also to Mr. N. Sivasothi for some useful comments and suggestions.

References:


The Zoological Reference Collection (ZRC) of the Department of Zoology, National University of Singapore, also known as the "Raffles Collection", is the former zoological collection of the Raffles Museum (presently the National Museum of Singapore). To date, the ZRC has about 160,000 animal specimens from the Southeast Asian region, including 15,000 mammals, 31,000 birds, 6,000 reptiles and amphibians, 30,000 fishes and 96,000 invertebrates. The collection derives its importance on the basis of its historical significance, as well as its being one of the most complete representation of Southeast Asian fauna. The ZRC is basically a collection for research purposes and has no display section for the public. It mainly functions as a readily accessible depository and source of reference for zoological specimens. Readers of The Pangolin are invited to donate any wild animal specimens found dead or seriously injured, accompanied by good locality data where possible to the ZRC for record purposes. For inquiries, please contact 7722876.

THE PANGOLIN: GUIDELINES FOR CONTRIBUTORS
1. Papers will be accepted for publication on all aspects of Singapore mammals, reptiles, amphibians and freshwater fish, as well as those from West Malaysia. Accounts of trips/journeys which contain descriptions/annecdotes of the relevant vertebrate fauna in Singapore and West Malaysia are also welcomed.
2. Papers submitted must be type-written in single-spacing on one side of the paper, and must have 25 mm margins on either side, and a headspace of 25 mm. Scientific names and foreign words or abbreviations should be underlined. This rule is applicable to all contributions except Recent Reports.

SUBSCRIPTION
Please forward all subscriptions to the above address, and enclose a money order/cheque/cash of S$4.00 as annual subscription fee. NOTE: Please address cheques or money order to: "Malayan Nature Society, Singapore Branch".