Data Article

Dataset of reptiles in fragmented forests at Tasik Kenyir, Hulu Terengganu, Malaysia

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A B S T R A C T

This data article is about reptiles (lizard, snake, and skink) captured from fragmented forest within man-made lake of Tasik Kenyir that is situated in Terengganu State, Peninsular Malaysia. Data collection was conducted in January 2019 and sampling methods included drift fenced-pitfall traps and Visual Encounter Survey (VES). All animals were identified, measured snout to vent (SVL) and weighted before their release at the site of capture. The highlights like conservation statuses in the wild, detection type and substrate type are presented with the data to increase its value. A total of 73 individuals from 18 species, 15 genera and seven families of reptiles were recorded. The data comprised of seven reptile family groups Agamidae, Gekkonidae, Scincidae, Colubridae, Elapidae, Viperidae and Homalopsidae. Reptiles like Cyrtodactylus quadrivirgattus (n = 33, 45.2%) and Aphaniotis fusca (n = 7, 9.6%) were most dominant in the checklist and most of the animals were captured using VES. Data of SVL and mass of the animals can be further interpreted by researchers to assess the health condition of animals in the altered habitats.

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1. Data

The data was constructed using 73 reptilian individuals sighted at various habitats within Tasik Kenyir. In this six days of passive and active samplings, a total of 18 reptilian species from seven family groups were transformed into Table 1 to indicate abundances. Additional information like common name and conservation statuses acquired from IUCN Red List were compiled with the data to focus valuable reptilian species available in Kenyir rainforest. Total family and individual counts were presented in Table 2. Complete raw data on reptiles capture along with the capture date, detection type, substrate type and additional morphological descriptions are available in a separate list (Table 3).

2. Experimental design, materials, and methods

Animals were captured using drift fenced-pitfall trap which is known as passive sampling, and Visual Encounter Survey (VES) which is known as active sampling. These sampling methods follow the first reptile study that was conducted at Tasik Kenyir by Ref. [1]. The coupled techniques are necessary as drift fenced-pitfall trap alone only catch ground dweller reptiles and almost impossible to catch arboreal reptiles. Hence, VES is needed to capture both ground dwellers including aquatic reptiles and arboreal reptiles at the same time.

Drift fences are borders that used to guide the movement of terrestrial animals towards the traps. Pitfall traps were constructed from 18 L plastic bucket that were punched with small hole to allow the flowing of excess water and were buried into the ground up to its lid level. The aluminium sheets were used to separate the traps with distance of 2.5 m from each trap. Due to the geographical limitation, traps were set up in ‘L’ shaped arrangement with the total of 12 traps and three traps for each set (Fig. 1). The arrays were replicated over multiple sites to determine the variation between different pitfall traps. Traps then were checked regularly before noon and also during the VES survey at night. VES
involves active searching of animals for both day (1000H–1300H) and night (2000H–2300H). Day and
night survey give an equal temporal representation to capture both diurnal and nocturnal species.
During night time, a wide-beam headlamp or torchlight was used to discover animals in the dark by
depending on the reflection produced by the animal’s eyes.
Specimens were properly handled and transferred into different plastic bags to avoid them from
having stress and injuries. Each of the specimen was identified by referring to various identification
books such as [2–5]. The photograph of each specimen was taken using a compact camera which
included the dorsal and ventral sides. Measurements such as snout-vent length (SVL) was obtained
using Vernier caliper while the weight was measured using an electronic balance. Voucher specimens
of species collected were preserved in 10% formalin and later stored in 70% alcohol before deposited at
Makmal Biologi Umum (FSSM, UMT) for future reference.

Table 1
Taxonomic classification, abundance and statuses in the wild of reptiles discovered from the sampling sites within Tasik Kenyir.

| FAMILY/SPECIES NAME       | COMMON NAME                        | NUMBER OF INDIVIDUAL | RELATIVE ABUNDANCE (%) | STATUS (IUCN) |
|---------------------------|------------------------------------|----------------------|------------------------|---------------|
| AGAMIDAE                  | Aphaniotis fusca                   | 7                    | 9.6                    | LC            |
|                           | Draco melanopogon                  | 4                    | 5.5                    | NE            |
| GEKKONIDAE                | Cnemaspis argus                     | 4                    | 5.5                    | LC            |
|                           | Cyrtodactylus consobrinus          | 4                    | 5.5                    | LC            |
|                           | Cyrtodactylus quadricarinatus      | 33                   | 45.2                   | LC            |
|                           | Gekko monarchus                    | 3                    | 4.1                    | NE            |
|                           | Gekko smithii                      | 3                    | 4.1                    | LC            |
|                           | Hemidactylus frenatus              | 4                    | 5.5                    | LC            |
|                           | Gehyra mutilata                    | 1                    | 1.4                    | NE            |
| SCINCIDAE                 | Eutropis longicauda                | 1                    | 1.4                    | NE            |
|                           | Eutropis multifasciata             | 1                    | 1.4                    | NE            |
| COLUBRIDAE                | Ahaetulla prasina                  | 1                    | 1.4                    | LC            |
|                           | Boiga dendrophila                  | 1                    | 1.4                    | NT            |
|                           | Dryadophis pictus                  | 1                    | 1.4                    | NE            |
|                           | Coelognathus flavolineatus         | 2                    | 2.7                    | LC            |
| ELAPIDAE                  | Bungarus flaviceps                 | 1                    | 1.4                    | LC            |
| VIPERIDAE                 | Pargas hageni                      | 1                    | 1.4                    | LC            |
| HOMALOPSIDAE              | Homalopsis buccata                 | 1                    | 1.4                    | LC            |

Note: Conservation status of reptiles follow International Union for Conservation of Nature Red List (IUCN) descriptions whereby
LC = Least Concern, NT = Near Threatened, and EN = Endangered.

Table 2
Family and total individual counts of reptiles at Tasik Kenyir.

| FAMILY         | NUMBER OF INDIVIDUAL |
|----------------|-----------------------|
| Agamidae       | 11                    |
| Gekkonidae     | 52                    |
| Scincidae      | 2                     |
| Colubridae     | 6                     |
| Homalopsidae   | 1                     |
| Elapidae       | 1                     |
| Viperidae      | 1                     |
Table 3
The unprocessed data of reptiles captured within Tasik Kenyir rainforest.

| DATE          | SPECIES NAME            | DETECTION TYPE | SUBSTRATE | SVL (mm) | WEIGHT (g) |
|---------------|-------------------------|----------------|-----------|----------|------------|
| 2 January 2019| Aphaniotis fusca        | C              | V         | 5.7      | 4.5        |
|               | Aphaniotis fusca        | C              | V         | 5.5      | 4.3        |
|               | Cyrtodactylus quadrivirgatus | C            | V         | 6.3      | 4.6        |
|               | Cyrtodactylus quadrivirgatus | C            | L         | 4        | 3.4        |
|               | Cyrtodactylus quadrivirgatus | C            | V         | 4.5      | 1.7        |
|               | Cyrtodactylus quadrivirgatus | C            | V         | 6.9      | 6          |
|               | Cyrtodactylus quadrivirgatus | C            | L         | 3.2      | 0.6        |
|               | Cyrtodactylus quadrivirgatus | C            | L         | 4.2      | 1.2        |
|               | Cyrtodactylus quadrivirgatus | C            | L         | 3.3      | 0.7        |
|               | Gehyra mutilata         | C              | L         | 2.5      | 0.3        |
|               | Hemidactylus frenatus   | C              | V         | 4.6      | 3.8        |
|               | Ahaetulla prasina       | C              | V         | 47.9     | 10.5       |
|               | Coelognathus flavolineatus | V             |           | -        | -          |
|               | Cyrtodactylus consobrinus | V           |           | -        | -          |
| 3 January 2019| Dendrelaphis pictus     | C              | V         | 66.5     | 68.8       |
|               | Cyrtodactylus consobrinus | C            | R         | 6.7      | 5.2        |
|               | Aphaniotis fusca        | C              | V         | 4.2      | 1.4        |
|               | Cyrtodactylus quadrivirgatus | C            | V         | 4.2      | 1.3        |
|               | Cyrtodactylus quadrivirgatus | V            | V         | -        | -          |
|               | Cyrtodactylus quadrivirgatus | V            | R         | -        | -          |
|               | Cyrtodactylus quadrivirgatus | V            | R         | -        | -          |
|               | Cyrtodactylus quadrivirgatus | V            | R         | -        | -          |
|               | Gekko monarchus         | V              | R         | -        | -          |
|               | Gekko monarchus         | V              | R         | -        | -          |
|               | Gekko monarchus         | V              | L         | -        | -          |
|               | Parias hageni           | V              | V         | -        | -          |
|               | Draco melanopogon       | V              | L         | -        | -          |
|               | Draco melanopogon       | V              | L         | -        | -          |
|               | Draco melanopogon       | V              | L         | -        | -          |
| 4 January 2019| Draco melanopogon       | C              | L         | 7.7      | 3.3        |
|               | Aphaniotis fusca        | C              | V         | 6.1      | 4.6        |
|               | Hemidactylus frenatus   | C              | T         | 3.1      | 0.6        |
|               | Hemidactylus frenatus   | C              | T         | 5        | 2.3        |
|               | Cyrtodactylus quadrivirgatus | C            | V         | 5.9      | 3.2        |
|               | Cyrtodactylus quadrivirgatus | V            | -        | -        | -          |
|               | Cyrtodactylus quadrivirgatus | V            | -        | -        | -          |
|               | Cyrtodactylus consobrinus | V          |           | -        | -          |
|               | Eutropis multifasciata  | V              | -        | -        | -          |
|               | Gekko smithii           | V              | -        | -        | -          |
|               | Gekko smithii           | V              | -        | -        | -          |
| 5 January 2019| Cnemaspis argus         | C              | R         | 6.1      | 4.4        |
|               | Gekko monarchus         | C              | R         | 4.7      | 1.9        |
|               | Aphaniotis fusca        | C              | V         | 2.8      | 0.4        |
|               | Cyrtodactylus quadrivirgatus | C            | V         | 6.7      | 4.8        |
|               | Cyrtodactylus quadrivirgatus | C            | V         | 5.2      | 3          |
|               | Cyrtodactylus quadrivirgatus | C            | V         | 7.2      | 6.6        |
|               | Cyrtodactylus quadrivirgatus | C            | V         | 6        | 5.8        |
|               | Cyrtodactylus quadrivirgatus | C            | V         | 6        | 4.2        |
|               | Cyrtodactylus quadrivirgatus | C            | V         | 4        | 2          |
| 6 January 2019| Cyrtodactylus quadrivirgatus | C            | V         | 6.6      | 5.9        |
|               | Cyrtodactylus quadrivirgatus | C            | V         | 5.7      | 4.4        |
|               | Cyrtodactylus quadrivirgatus | C            | V         | 5.6      | 4          |
|               | Cyrtodactylus quadrivirgatus | C            | V         | 6.5      | 5.5        |
|               | Cyrtodactylus quadrivirgatus | C            | V         | 6        | 4.4        |
|               | Cyrtodactylus quadrivirgatus | C            | V         | 3.5      | 1.1        |
|               | Cyrtodactylus quadrivirgatus | C            | V         | 6        | 2.4        |
|               | Cyrtodactylus quadrivirgatus | C            | V         | 6.1      | 5.6        |
|               | Cyrtodactylus quadrivirgatus | C            | V         | 6.7      | 6.3        |
|               | Cyrtodactylus quadrivirgatus | C            | V         | 5.2      | 3.2        |
|               | Cyrtodactylus quadrivirgatus | C            | V         | 5        | 2.3        |
|               | Cyrtodactylus quadrivirgatus | C            | V         | 4.7      | 2.3        |
Table 3 (continued)

| DATE | SPECIES NAME            | DETECTION TYPE | SUBSTRATE | SVL (mm) | WEIGHT (g) |
|------|-------------------------|----------------|-----------|----------|------------|
|      | Cyrtodactylus quadrivirgatus | V              | V         | —        | —          |
|      | Gekko monarchus         | C              | R         | 6.7      | 6.3        |
|      | Eutropis longicaudata   | C              | X         | 7.6      | 13.9       |
|      | Aphaniotis fusca        | C              | V         | 4        | 1.6        |
|      | Aphaniotis fusca        | C              | V         | 2.3      | 0.5        |
|      | Hemidactylus frenatus   | C              | R         | 5.9      | 3.9        |
|      | Cyrtodactylus consobrinus | C              | R         | 11.9     | 29.8       |
|      | Cnemaspis argus          | C              | R         | 5.3      | 3.9        |
|      | Cnemaspis argus          | C              | R         | 5.6      | 3.9        |
|      | Cnemaspis argus          | C              | R         | 5.6      | 3.6        |
|      | Gekko smithii           | C              | T         | 15.1     | 73.6       |
|      | Boiga dendrophila        | C              | V         | 51.2     | 19.3       |
|      | Coelognathus flavolineatus | C              | R         | 127      | 379.4      |
|      | Homalopsis buccata      | C              | W         | 23.5     | 7.2        |

Note: Detection type are denote with V = visual observation and C = capture. Substrate type are denote with L = log, R = rock, T = building wall, V = vegetation, W = water, X = leaf litter. Description of measurement is abbreviated as SVL = snout to vent length. Measurements are denote with g = gram and mm = millimeter.

Fig. 1. Illustration of a set of ‘L’ shape drift fenced-pitfall trap.

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Conflict of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.
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