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Inventory of Herpetofauna Types in Banyak Angkrem Hills and Kedung Kopong Salaman, Magelang

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Abstract : **.** Indonesia is an area that has various kinds of herpetofauna, one of which is in the Hills of Banyak Angkrem area in Karang Kulon Village and Kedung Kopong area in Kalirejo Village, both in Salaman, Magelang. This study aims to determine the types of herpetofauna that found in that area. The method used in this research is VES (Visual Encounter Survey). The VES method was used to count the individuals found by the observer according to a predetermined paths. This research was conducted in February until March 2020. Observation carried out in the morning and evening. The total number of herpetofauna were found during the observation are 13 species of 7 families, there are 4 reptiles and 3 amphibians.

Keywords. Inventory, Herpetofauna, Banyak Angkrem Hills, Kedung Kopong.

INTRODUCTION

Banyak Angkrem Hills and Kedung Kopong Waterfall are located in Kalirejo Village, Salaman, Magelang which is an area where many natural tourist attractions are still beautiful and the diversity of plants that thrive around the area shows that the surrounding natural conditions are still maintained and the river conditions are still clean can be a source of livelihood for the surrounding fauna.

Herpetofauna comes from the word "herpeton", belonging to reptiles, consisting of amphibians and reptiles, both of which occupy the same habitat and are classified as exothermic vertebrates, and have the same observation method (Riko Irwanto et al, 2019). Herpetofauna is an interesting animal, but it is rarely known by the public, because there are several types of herperofauna that are hard to find, however, research on herpetofauna continues to increase. Herpetofauna has an important role in the ecosystem, both directly and indirectly (Herdanu et al, 2014), including herpetofauna which functions as an environmental bio-indicator, pest control, and as a source of germplasm (Subeno, 2017).

MATERIALS AND METHODS

Study area

Data collection sites were carried out in Banyak Angkrem Hills and Kedung Kopong Waterfall are located in Kalirejo Village, Salaman, Magelang which is an area are still beautiful and the diversity of plants that thrive around the area shows that the surrounding natural conditions are still maintained and the river conditions are still clean can be a source of livelihood for the surrounding fauna.

Figure 1 and Figure 2 show the location and track of the survey area in Kedung Kopong and Banyak Angkrem, Salaman, Magelang.

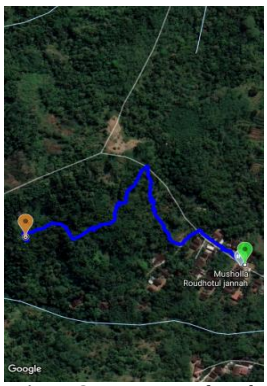

Figure 2. Location and track for collecting the data in Banyak Angkrem, Salaman, Magelang.

Figure 1. Location and track for collecting the data in Kedung Kopong, Salaman, Magelang.

Data collection and identification of herpetofauna types

The tools used in this study were a set of stationery used for writing, a camera that was used for documenting, a flashlight for lighting at night, a *tallysheet* for recording results, and the identification book "Herpetofauna Field Guide" by National Park. Alas Purwo and other books. Data was collected using the VES method *(Visual Encounter Survey).* The VES method is used to count individuals met by observers according to a predetermined path (Heyer, 1994). This survey was based on the several visits during February-March 2020 (February 29 - March 1, March 7-8, and March 14-15). Data collection time is carried out at two times, namely at 07.00-11.00 WIB for data collection of herpetofauna types which are active in the morning (diurnal) and at 21.00-00.00 WIB for data on the types of herpetofauna that are active at night (nocturnal) (Eprilurahman, 2012).

Data analysis

The collected data were analyzed descriptively and presented in tabular form. Furthermore, the data is identified based on books and the observation data described according to the species name of each type of herpetofauna and arranged based on their family.

RESULT AND DISCUSSION

Result

Data collection was carried out for 3 weeks starting from February 28, 2020 to March 15, 2020 in the Bukit Banyak Angkrem and Kedung Kopong areas, with collection times from 07.00 to 10.00. Then it is continued at 21.00 until 00.00 WIB.. In collecting the data, observations were made in the entire area of the Bukit Banyak Angkrem area and the Kedung Kopong area. The research found that herpetofauna included 8 species of reptiles and 5 species of amphibians.

Table 1.1 Data on herpetofauna species encountered and their conservation status.

Taxon		Conservation status to IUCN	Number of individuals
Family	**Species**		
Agamidae	*Bronchocela jubata*	LC	2
	Dracko sp	LC	11
Buffonidae	*Duttaphrynus melanotictus*	LC	9
	Phrynoidis aspera	LC	6
Colubridae	*Ahaetulla prasina*	LC	1
Gekkonidae	*Gekko gecko*	NE	5
	Hemidactylus frenatus	LC	26
Rachophoridae	*Polypedates leucomystax*	LC	1
Ranidae	*Fejervarya limnocharis*	LC	19
	Hylarana chalconota	LC	3
Scinidae	*Dasia olivacea*	LC	2
	Eutropis multifasciata	LC	11
	Sphenomorphus sanctus	LC	10
Total			106

Based on the data obtained, 4 families of reptiles were obtained, namely Agamidae, Colubridae, Gekkonidae, and Scinidae. Of the 4 reptile families, several species and numbers were found according to table 1.1. As for the amphibians, there were 3 families, namely Buffonidae, Ranidae and Rachophoridae.

Discussion

Amphibians

- Buffonidae

Duttaphrynus melanostictus

Medium body size and puffy, rough skin texture with dark bumps. triangular-shaped head, protruding round eyes, oblong-shaped parathyroid glands, the tympanum looks lighter, there is a black line from the top of the eye to the muzzle, relatively short legs, blunt toes and hands. There were 9 individuals found in the Kedung Kopong area.

Phrynoidis aspera

The surface of the skin is coarse and pockmarked, the body size is relatively large and muscular, the forefoot type is clawed, and the hind feet are webbed. The supraorbital groove is connected to the parathyroid gland by a supra-tympanic groove. The body is dark brown, grayish or blackish in color. Six individuals were found in the Kedung Kopong area.

- Ranidae

Fejervarya limnocharis

Body size ranges from 32 mm to 58 mm, has a pointed head and two metatarsal nodules, there is a pair of skin folds from the back of the eyes to the shoulders, semi-webbed frog legs with two fingers at the end of the free swimming membrane, occupying disturbed habitats. There were 17 individuals found in Kedung Kopong and 2 individuals in Banyak Angkrem.

Hylarana chalconota

The shape of the head is tapered, the tympanum is very visible brown, the hind limbs are fully membranous except for the fourth finger, the tips of the limbs have a round disc-shaped enlargement, often the dorsal is yellowish or greenish brown, laterally whitish or light yellowish green. There were 3 individuals found in Kedung Kopong.

- Rachophoridae

Polypedates leucomistax

Relatively medium in size (37 mm to 75 mm), the toes are broad with a flat tip, the scalp is attached to the skull, the toes are semi-webbed, the toes of the hind feet are almost completely webbed. Smooth skin texture with fine-speckled lower body skin, yellowish brown color all over the body or with black spots or with a clear line extending from the head to the ventral. One individual was found in the Kedung Kopong area

Reptile

- Agamidae

Bronchocela jubata

The lizard is medium in size, has a long, dangling tail, a total length of 550 mm, has a mane on its back which is composed of long tapering scales, a soft mane resembles skin, the eyes are surrounded by wide and flexible lids.

Dracko sp.

Dubbed the flying lizard, there are a pair of wings along the sides of the body, there is a dewlap located under the head, which functions as a communication tool, the dewlap in males is used as a means of

communication and to attract females. Is a diurnal species.

- Colubridae

Ahaetulla prasina

A long green snake, its body is slender and small, about the size of a thumb, its head is a sharp triangle, its pupils are crossed and venomous is weak.

- Gekkonidae

Gekko gecko

It has a striking color with a yellowish and reddish rash that spreads all over the body, and a whitish gray base color. The tail is rounded, there are rows of punctate pimple. There were 5 individuals in the Kedung Kopong area and many angkrem

Hemidactylus frenatus

The shape of the head is elongated, the size of the snout to the eye is longer than the eye to the ear, the ear holes appear small and round, the head and dorsal are covered by granular scales, while the ventral body is covered by cycloid scales, there are small claws attached to the middle of the fingers -the finger. Found in the area of the Kedung Kopong mosque.

- Scincidae

Dacia olivacea

The dorsal is dark olive brown with faint blackish patches and pale green spots that line its back, the head is dark brown with bright yellow edges and lids, the ventral is whitish green or yellowish green. Only one individual was found in the many angkrem area

Eutropis multifasciata

Lizards are medium in size, with a sturdy and shiny body, often brown with or without dark stripes on the back, older sides and white spots, or yellow, orange or red patches. Muzzle short and blunt, lower eyelid scaly. As many as 11 individuals were found, their habitat in terrestrial areas

Sphenomorphus sanctus

Slender body with short muzzle, oval and open tympanum, smooth dorsal scales, and wider dorsal than lateral, tail tapered at the tip, and half the length of the head and body, back brown with grayish-white stripes.

COCLUSIONS

Based on the research data, it can be concluded that there are severel types of herpetofauna consisting of reptiles and amphibians in the Banyak Angkrem Hills and Kedung Kopong areas. Four reptile families were found, namely Agamidae, Colubridae, Gekkonidae, Scinidae and three amphibian families, namely Buffonidae, Ranidae, and Rachophoridae. The types of species found include: *Eutropis multifasciata, Fajervarya limnocaris, Phrynoidis aspera, Hylarana chalconata, Gekko gecko, Duttaphrynus melanostictus, Polypedates leucomystax, Sphenomorphus sanctus, Dasia olivacea, and Ahaetulla prasina*.

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