

## Animals Emerge in the Reforestation Area

The arrival of many animal species in this reforestation area has formed a new ecosystem: this was expected and is a normal part of mining. The success of replanting nonetheless remains a high point for everyone at PTAR. Species that have emerged in the new forest are:

1. Rufous-tailed tailorbird (*Orthotomus sericeus*)
2. Purple-naped sunbird (*Hypogramma hypogrammicum*)
3. Oriental magpie-robin (*Copsychus saularis*)
4. Black-naped monarch (*Hypothymis azurea*)
5. Fluffy-backed tit-babbler (*Macronous ptilosus*)
6. Common green frog (*Hylarana erythraea*)
7. Asian common toad (*Duttaphrynus melanostictus*)
8. Asian common frog (*Hylarana nicobariensis*)
9. File-eared tree frog (*Polypedates otitopus*)
10. Common tree frog (*Polypedates leucomystax*)
11. Long-tailed macaque
12. Reticulated python
13. Sumatran Serow (*Capricornis sumatraensis*)
14. Asian forest tortoise (*Manouria emys*)
15. Asiatic softshell turtle (*Amyda cartilagenia*)

### LOCAL PLANTS AND TREES IN NURSERIES FROM INDIGENOUS FORESTS

These include: Terap, Kemayau, evergreens, Camphor, Silk, Hibiscus, Illipe nut, Durian, and Toba frankincense trees.



Terap



Kemayau



Evergreen

### EACH SPECIES HAS AN IMPORTANT ROLE

The important presence of birds in an ecosystem is as a facilitator and counterbalance, acting as seed breakers, pollinators, and as an "Apex Predator" (top of pyramid predator) a pest predator. Birds develop a reciprocal relationship with and interdependence with their environment. Acting all along the food chain, birds both create and reflect a healthy web of life within an ecosystem. Helping plants grow, managing the populations of prey animals and creating a vibrancy in the air that is a hallmark of Indonesia as home to 15% of the world's species of birds and 17% of all birds in the world.



Amphibians function as predators to insects and insect larvae. By controlling the underlying population, amphibians play an important role in the food chain. Amphibians also importantly act as bio-indicators of environmental damage. In recent years, researchers have realized that, especially at the egg and tadpole stages, amphibians are very sensitive to environmental change and damage.



### FROGS AND TOADS DIFFERENCES

Toads are broad and large, the skin is dry, thick and leathery, and the legs are relatively short. Both toads and frogs are great jumpers. Toads, of the "Bufonidae" family, are easy to find almost anywhere. You could say these animals are adaptable and resistant to "disturbances" around them.

Frogs are slim with wet or moist skin, slimy, thin and smooth. Frogs also have longer legs, so they can jump farther. In addition, the hind legs are webbed so that some breeds are excellent swimmers.



**Chiromantis nauli** is a new species of frog discovered by two LIPI researchers; Riyanto & Kurniati in 2014 in the Nauli Bay area, Sibolga, North Sumatra. This species has plain yellowish-brown skin, white on the belly and has no membranes between the fingers.

# 230

Varieties of local flora species sown in nursery facilities.

# 310

Total varieties taken from native vegetation and sown in nursery facilities.

# 142

Number of amphibian and reptile species in the Batangtoru forest.