

Phenology Calendar in a *Castanopsis* (chinkapin) forest

Spring March-April

Yellow green (new shoots)
Yellow (Flower)
Brown (withered leaf)
Green
larva eat new shoots

A branch in spring
The defoliation season of *castanopsis sieboldii* begins from around March. The color gradation spreads from branch to tree, then to forest.

Spring flowers
E.g.: *Calanthe amamiana* (orchid): March
Rhododendron latoucheae var. *amamiense* (azalea): April

Amami woodcock family

Birds breed after eating insects that have increased in number
E.g.: Amami Jay, Amami Woodcock, Ryukyu Robin, Amami Woodpecker

The availability of plentiful source of honey and pollen allow for dramatic increases in insect numbers
E.g.: *Paratrichius duplicatus okinawanus* (flower chafer)

***Castanopsis sieboldii* leaves start to shoot around this time, and eventually yellow flowers bloom. Flowers lure insects, and these insects become a food source for wild birds, and the breeding season soon arrives.**

The fallen leaves start increasing the water retention capacity of a mountain before the rainy season sets in the middle of May. This allows insects and soil organisms to flourish and this becomes the ecosystem of the islands.

Rainy season May to June

Forests store enough moisture on thickly accumulated fallen leaves and soil on the ground. Such stored water becomes a source of life for animals and plants.

Summer July - September

The merciless summer sunlight of a subtropical climate comes. This is also the season when typhoons begin passing through the region. *Castanopsis* trees function as a shield to protect creatures from typhoons.

Ruddy Kingfisher (summer bird) breeding season
The rich waterside environment provides a diverse food source
E.g.: Baits for Ruddy Kingfisher: rats, lizards, frogs, flower chafers, etc.

Breeds by the waterside
Babina subaspera (frog)

Climb from a marsh to a tree
Cynops ensicauda (newt) by the waterside

The water volume increases in marshes and mountain torrents.

Becomes active due to the increase in moisture levels
Habu

They eat moths and cicadas to breed and raise offspring
Otus elegans (owl)

The number of moths increase
Larva eat new shoots

The forest floor where water is stored
Earthworm numbers increase
Bacteria and microorganism numbers increase
Anderson's alligator newt breeding season

Shields and protects creatures from typhoons

Amami Ishikawa's Frog
climb from a marsh to a tree

great chirping of *M. oshimensis* (cicada)
***Otus elegans* (owl) leaving their nests**

Autumn October to December

Autumn is harvest season. *Castanopsis sieboldii* bear a great number of acorns at the tip of its branches. *Castanopsis* acorns that have fallen on the ground become an important food source for creatures living in the forest.

Winter January - February

For mammals that enter the breeding season in autumn, winter is a nurturing season.

Ryukyu long-furred rat breeding season

Amami rabbit breeding season

Spiny rat breeding season

Ryukyu long-furred rat offspring

Epiphytic Orchid blossom
Liparis viridiflora (orchid)

Spiny rat offspring

The Amami rabbit covers its burrow with soil when lactation is over.



"Amami"

Toward World Natural Heritage Registration