The Aso Caldera, one of the largest in the world, measuring 18 km east to west and 25 km north to south, is an area rich in natural grasslands, wetlands, and rugged mountain terrain. The environment of the Aso Caldera provides important habitats for many animals. The animals are attracted by almost 1,600 different species of plants that grow in the area. Of these species, 600 are found within the grasslands, forming the basis of a flourishing ecosystem supporting many rare insects, butterflies, birds, and mammals.

Some of the creatures typically found in Aso include butterflies such as the Aso Blue Butterfly (Shijimiaeoides divinus barine). Insects such as the Daikoku-kogane dung beetles (Copris ochus) and the Kyushu-ezozemi cicadas attract birds to the area. About 300 species of birds have been recorded in Kumamoto Prefecture. Half of them are found in the grasslands of Aso. Smaller birds such as meadow bunting (Emberiza cioides), zitting cisticola (Cisticola juncidis), and the black-browed warbler (Acrocephalus bistrigiceps), may also be observed, as well as a number of raptors such as the eastern buzzard (Buteo japonicus) and the Japanese sparrowhawk (Accipiter gularis), which prey on small mammals in the grasslands. Other creatures found in Aso include the Japanese giant salamander (Andrias japonicus), the Kajika frog (Buergeria buergeri), and the Japanese odd-scaled snake (Achalinus).