Conservation

Home

Due to its scientific, economic, and cultural significance, the Petrified Forest Piedra Chamana was declared patrimony of the nation by the Peruvian government in 1997. This provides protection for the fossils, but illegal fossil collecting is not the only threat to Sexi's natural resources. Both government and local involvement is necessary to ensure the longevity of the fossil forest as well as the modern flora. The paleontological and natural values of the site may merit more formal international recognition in the future (see Woodcock et al. 2020 on the About-Research page).

Fossil Inventory & Monitoring

In 2005, researchers surveyed and photographed the fossil sites at Sexi. At the time, the fossil forest was relatively undisturbed. In 2009, monitoring detected some loss of fossil material, and by 2018 significant human and erosional disturbance was observed. While fossil monitoring continues, cooperation between researchers, the citizens of Sexi, and government and nonprofit organizations is essential to the successful preservation of the fossils.



Routine monitoring of the fossil sites detected the loss of a palm trunk between 2005 and 2009. The exact cause of the fossil's disappearance is currently unknown.



Modern Flora

Two studies of the modern flora have documented its high biodiversity and the unique aspects of the plant communities near Sexi (see Aragón et al.2006 and Aragón and Woodcock 2010 references on our About-Research page). The diverse broadleaved evergreen sclerophyllous forest and woodland that persists in undisturbed areas consists of trees, shrubs, and epiphytes with a dense mat layer of ferns, geophytes, and orchids. This vegetation is adapted to the acidic soils and seasonally dry climate that features both drought and fog from the Pacific. These studies found that disturbance of the protective mat layer causes soil erosion, loss of structural integrity, and decreased biodiversity and ecosystem functioning, including the loss of epiphytes and the fog-trapping capacity of the vegetation. The researchers have called for urgent measures to protect the flora and safeguard the biotic communities that local people depend upon for their livelihood.



Clusia cajamarcensis is a plant species threatened by disturbance. The fruit of this shrub is shown above.

Threats

The soft volcanic rocks near Sexi are very vulnerable to disturbance from wind, rain, livestock, and human activity. If the dense protective cover of the native vegetation is disturbed, then the soil is no longer protected from erosion, causing high rates of denudation and loss of both soil and subsoil. This leads to the formation of vegetated islands, followed by loss of the entire vegetative cover. This denudation from erosion also creates threats to the fossils, which are also threatened by disturbance and trampling by animals and humans and by illegal fossil collecting.





Peruvian law provides for the conservation and protection of the petrified forest. The fossils are part of the Patrimony of the Nation and are protected by law.