

# Epiphytes/Lithophytes of Xunantunich Archaeological Reserve, Cayo District, BELIZE 1

Bruce K. Holst<sup>1</sup>, David Amaya<sup>2</sup> & Sayuri Tzul<sup>2</sup>

<sup>1</sup>Marie Selby Botanical Gardens, <sup>2</sup>Ian Anderson's Caves Branch Botanical Garden

© Marie Selby Botanical Gardens (bholst@selby.org), Ian Anderson's Caves Branch Botanical Garden (ellabaron2014@gmail.com). Photos by David Amaya (DA), Ella Baron (EB), Wade Collier (WC), Elizabeth Gandy (EG), Bruce Holst (BH), Elma Kay (EK), Marvin Paredes (MP), Sayuri Tzul (ST). Support from Marie Selby Botanical Gardens, Ian Anderson's Caves Branch Jungle Lodge.

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## Flower and seed-bearing Plants



*Anthurium schlechtendalii*  
(Araceae; BH)



*Anthurium schlechtendalii*  
(Araceae; EB)



*Anthurium schlechtendalii*  
(Araceae; BH)



*Monstera acuminata* (perforated form)  
(Araceae; BH)



*Monstera acuminata* (whole leaf form)  
(Araceae; BH)



*Monstera acuminata*  
(Araceae; BH)



*Monstera acuminata*  
(Araceae; BH)



*Philodendron radiatum*  
(Araceae; EB)



*Philodendron radiatum*  
(Araceae; BH)



*Syngonium podophyllum*  
(Araceae; BH)



*Syngonium podophyllum*  
(Araceae; BH)



*Syngonium podophyllum*  
(Araceae; BH)



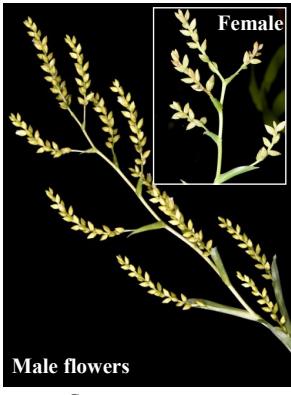
*Aechmea bracteata*  
(Bromeliaceae; BH)



*Aechmea bracteata*  
(Bromeliaceae; BH)



*Catopsis morreniana*  
(Bromeliaceae; EB)



*Catopsis morreniana*  
(Bromeliaceae; WC)



*Catopsis sessiliflora*  
(Bromeliaceae; EB)



*Catopsis sessiliflora*  
(Bromeliaceae; EB)



*Tillandsia balbisiana*  
(Bromeliaceae; BH)

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*Tillandsia balbisiana*  
(Bromeliaceae; EB)



*Tillandsia brachycaulos*  
(Bromeliaceae; EB)



*Tillandsia brachycaulos*  
(Bromeliaceae; EB)



*Tillandsia juncea*  
(Bromeliaceae, EB)



*Tillandsia juncea*  
(Bromeliaceae, EB)



*Tillandsia schiedeana*  
(Bromeliaceae; EB)



*Tillandsia schiedeana*  
(Bromeliaceae; PN)



*Tillandsia utriculata*  
(Bromeliaceae; BH)



*Tillandsia utriculata*  
(Bromeliaceae; EB)



*Tillandsia variabilis*  
(Bromeliaceae; EB)



*Tillandsia variabilis*  
(Bromeliaceae; BH)



*Epiphyllum phyllanthus*  
(Cactaceae; EB)



*Epiphyllum phyllanthus*  
(Cactaceae; EG)



*Hylocereus trigonus*  
(Cactaceae; EB)



*Hylocereus trigonus*  
(Cactaceae; BH)



*Selenicereus testudo*  
(Cactaceae; BH)



*Selenicereus testudo*  
(Cactaceae; EB)



*Codonanthe* sp.  
(Gesneriaceae; EB)



*Ficus* sp. "strangler fig"  
(Moraceae; BH)



*Ficus* sp. "strangler fig"  
(Moraceae; BH)

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Female flowers



Male flower



Cohniella ascendens  
(Orchidaceae; BH)



Cohniella ascendens  
(Orchidaceae; DA)



Epidendrum cardiophorum  
(Orchidaceae; EB)



Epidendrum cardiophorum  
(Orchidaceae; WC)



Epidendrum nocturnum  
(Orchidaceae; summit; EB)



Epidendrum nocturnum  
(Orchidaceae; summit; EB)



Epidendrum stamfordianum  
(Orchidaceae; MP)



Epidendrum stamfordianum  
(Orchidaceae; EB)



Lophiaris lurida  
(Orchidaceae; BH)



Lophiaris lurida  
(Orchidaceae; EB)



Maxillariella tenuifolia  
(Orchidaceae; DA)



Maxillariella tenuifolia  
(Orchidaceae; EB)



Nemaconia striata  
(Orchidaceae; BH)



Nemaconia striata  
(Orchidaceae; EB)



Oncidium sphacelatum  
(Orchidaceae; EK)



Oncidium sphacelatum  
(Orchidaceae; EB)



Polystachya foliosa  
(Orchidaceae; MP)



Polystachya foliosa  
(Orchidaceae; EB)

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*Prosthechea cochleata*  
National Flower of Belize  
(Orchidaceae; EB)



*Prosthechea cochleata*  
National Flower of Belize  
(Orchidaceae; EB)



*Prosthechea cochleata*  
National Flower of Belize  
(Orchidaceae; EB)



*Coussapoa oligocephala* "strangler"  
(Urticaceae; BH)



*Coussapoa oligocephala* "strangler"  
(Urticaceae; BH)



*Pilea microphylla*  
(Urticaceae, BH)



*Pilea microphylla*  
(Urticaceae, BH)

## Spore-bearing Plants



*Niphidium crassifolium*  
(Polypodiaceae; BH)



*Niphidium crassifolium*  
(Polypodiaceae; BH)



*Nephrolepis biserrata*  
(Nephrolepidaceae; EB)



*Nephrolepis biserrata*  
(Nephrolepidaceae; EB)



*Nephrolepis* sp.  
(Nephrolepidaceae; BH)



*Nephrolepis* sp.  
(Nephrolepidaceae; BH)



*Phlebodium decumanum*  
(Polypodiaceae; BH)



*Phlebodium decumanum*  
(Polypodiaceae; BH)  
Note orange rhizome.



*Pleopeltis marginata*  
(Polypodiaceae; BH)



*Pleopeltis marginata*  
(Polypodiaceae; BH)



*Pleopeltis polypodioides*  
(Polypodiaceae; BH)

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*Pleopeltis polypodioides*  
(Polypodiaceae; BH)



*Adiantum tricholepis*  
(Pteridaceae; BH)



*Adiantum tricholepis*  
(Pteridaceae; BH)



*Vittaria* sp. "short leaves"  
(Pteridaceae; BH)



*Vittaria* sp. "short leaves"  
(Pteridaceae; ST)



*Vittaria* sp. "long leaves"  
(Pteridaceae; BH)



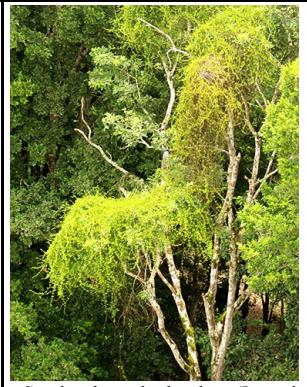
*Vittaria* sp.  
(Pteridaceae; BH)



*Anemia adiantifolia*  
(Schizaeaceae; BH)



*Anemia adiantifolia*  
(Schizaeaceae; BH)



*Struthanthus suborbicularis* (Loranthaceae; BH)

**NOT AN EPIPHYTE**—these plants are hemiparasitic. They produce their own food through photosynthesis, but take water and nutrients from their hosts.



Fruits



**Left:** Epiphytes adorn tree branches along the Mopan River at the Xunantunich ferry landing, such as the fine-leaved bromeliad *Tillandsia juncea* on the left, and the tightly appressed, climbing cactus, *Selenicereus testudo* in the center (BH). **Above:** View from the top of El Castillo of some Xunantunich structures and surrounding areas (BH).

# Epiphytes/Lithophytes of Xunantunich Archaeological Reserve, Cayo District, BELIZE 6

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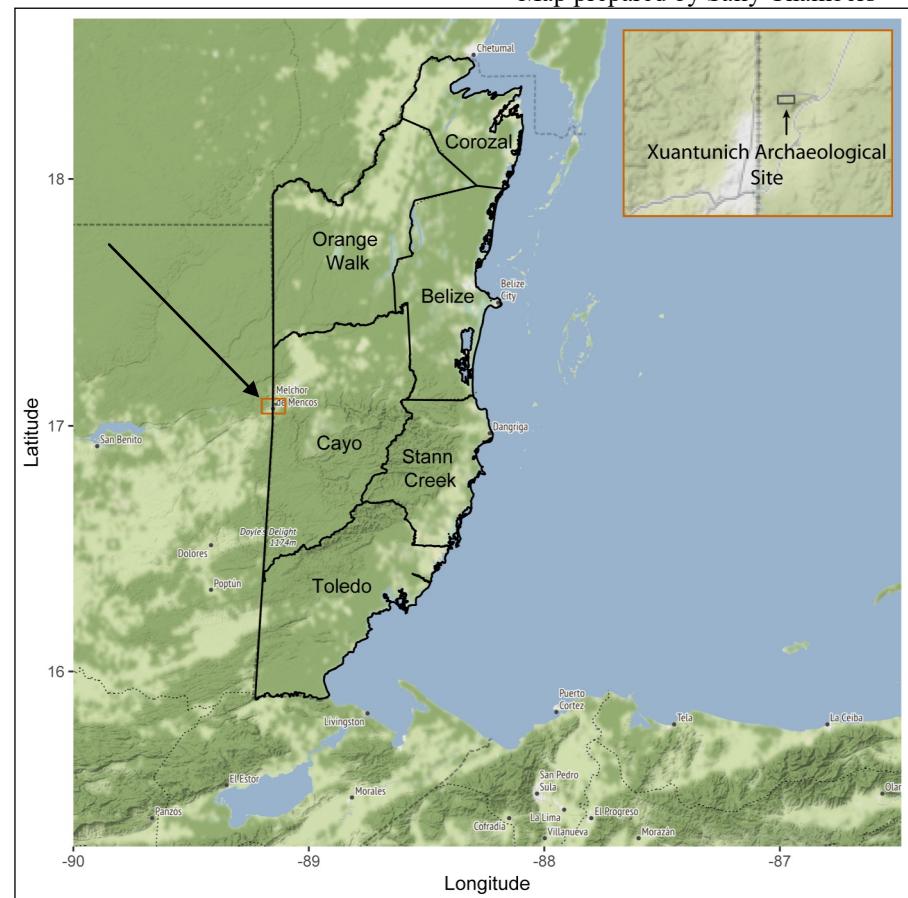
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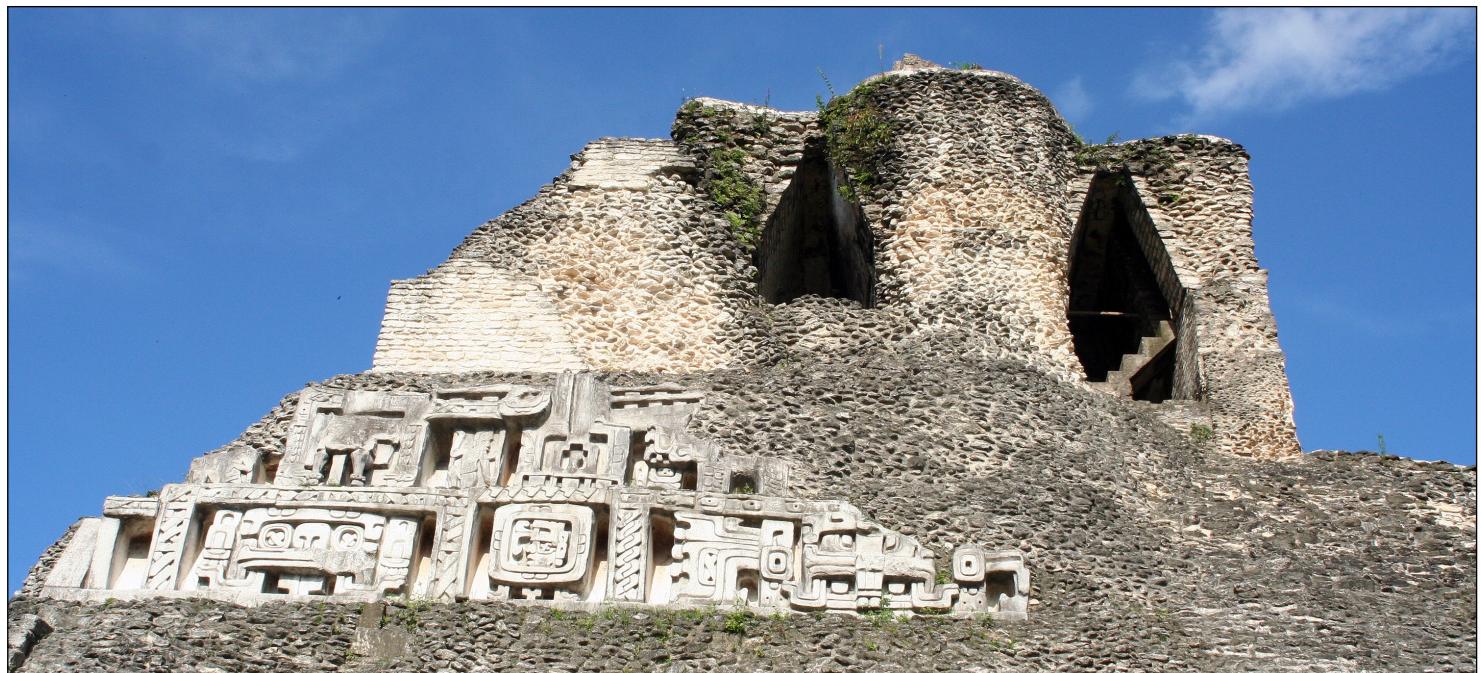
Xunantunich “Stone Woman,” was the first excavated Maya site in Belize dating back to the classic period. The site as we know it today was built around AD 600 and was occupied for about 400 years. The reserve covers 51.6 acres (20.9 ha) of which 2.6 km<sup>2</sup> consist of series of six plazas, more than 26 structures including temples and palaces, courts for ball games, and several residences. Xunantunich has the second tallest Maya structure in Belize “El Castillo” (130 ft/40 m tall), a complex building where the elite rulers and their extended family lived. From this structure neighboring Guatemala and surrounding communities can be viewed, as well as the other stone structures at the site. The Maya civilization had advanced architecture and a deep connection with the natural environment. They used the forest as their source of shelter, food, medicine, and rituals. The cohune palm (*Attalea cohune*) is common in the area and was used for shelter, food, and fuel. This palm and other trees in the area such as mahogany (*Swietenia macrophylla*) and ceiba (*Ceiba pentandra*) are excellent hosts for epiphytes. The ceiba tree represented the Maya life journey on earth and the sky, and was a spiritual symbol for their afterlife. The trunk represented the middle world of life, the branches the upperworld and the roots the underworld. The trumpet tree (*Cecropia peltata*) and madre de cacao tree (*Gliricidia sepium*) commonly found in the area are known to be medicinal. The allspice tree (*Pimenta dioica*) is also medicinal and is used for spices, complimenting traditional dishes still part of the Belizean cuisine.

Xunantunich is located across the Mopan River from San Jose Succotz village, and is the most visited Maya site in Belize.

Map prepared by Sally Chambers



*The authors appreciate the assistance of Antonio Beardall, Institute of Archaeology, in reviewing the text.*



Frieze on west side of El Castillo. Several species of lithophytic plants can be seen on the walls. (BH).