

Project Update: January 2011

Water quality analysis:

Water surveys are being conducted approximately every 3 weeks, at eight sampling points (marked with red crosses):

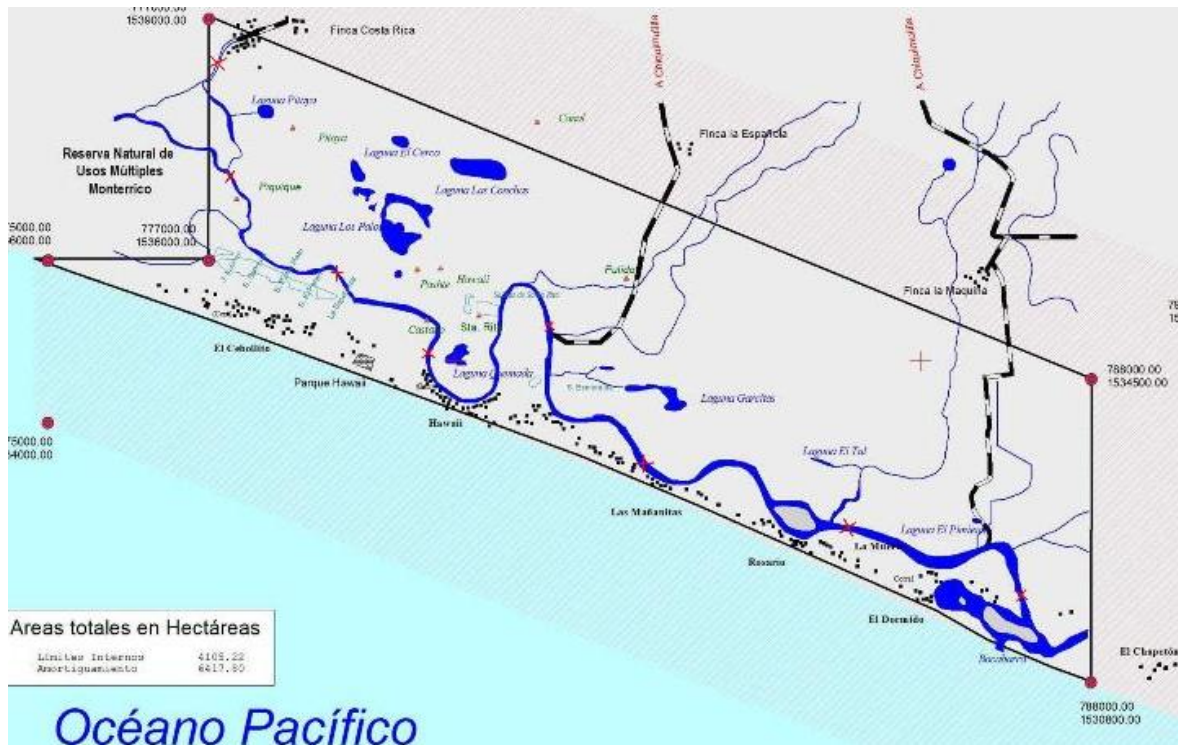


Fig. 1

1. Papaturre 13°54'06.5" N; 90°26'03.9" W
2. Piquique 13°53'15.2" N; 90°25'01.2" W
3. El Cebollito 13°53'20.5" N; 90°25'03.9" W
4. Castano 13°52'20.3" N; 90°24'32.2" W
5. El Salado 13°52'15.9" N; 90°24'33.7" W
6. Las Mananitas 13°52'15.9" N; 90°24'33.7" W
7. El Rosario 13°52'15.9" N; 90°24'33.7" W
8. El Chapeton 13°52'13.9" N; 90°24'33.7" W

Ichthyofauna – fish species survey:

In order to investigate local ichthyofauna we have decided to conduct interviews with local fishermen. The majority of fish that live in Chiquimulilla Canal are salt water fish that enter the river from the Pacific Ocean in the summer (starting September) and they stay there until March when they go back to the ocean. The only fresh water species is a fish called by locals *Mojarra*. A very small amount of fish stay in the river over the winter season and hide in lagoons (Fig.1). During the rainy season a lot of organic matter is brought to the river from upper parts of the mainland. This organic matter, consisting of household trash, dead animals, plant parts, etc., causes oxygen depletion that is harmful for fish and other living organisms from the river. For that reason salt water fish go back to the ocean and fresh water fish seek shelter in the lagoons (Fig.1).

Most common fish species are: *Robalo*, *Pargo*, *Bagre*, *Mojarra* and *Pululo* (Tab.1).

Other fish present in the canal are: *Leta*, *Miche*, *Barbuda*, *Guapote*, *Curvina*, *Dorado*, *Pancha/Panchorra*, *Lisa*, *Guavina*, *Vieja*, *Machorra* (Tab. 1).

The average size of a snook and a snapper is 30-50 cm long.

Local name	Scientific name	English name
Róbalo	<i>Centropomus</i> sp.	Snook
Pargo	<i>Luthamis synogris</i>	Dog Snapper
Bagre	<i>Bagre ponanensis</i>	Cat fish
Mojarra	<i>Cichlasoma synspilum</i>	Redhead cichlid
Pululo	?	?
Aleta	?	?
Miche	?	?
Barbuda	?	?
Guapote	<i>Dermitatos maculatus</i>	Pacific sleeper
Curvina	<i>Cynoscion reticulatus</i>	Stripped weakfish
Dorado	<i>Coryphaena hippurus</i>	Mahi Mahi
Pancha/Panchorra	<i>Micropogonias altipinnis</i>	Tallfin croaker
Lisa	?	?
Guavina	<i>Gobiomorus dormitor</i>	Bigmouth sleeper
Vieja	?	?
Machorra	<i>Lepisosteus tropicus</i>	Gar

In addition to the interviews we are conducting fish surveys accompanying some fishermen (who let us go fishing with them) and recording species and size of the fish they catch.

Bird monitoring:

Bird observations are being conducted on regular basis by team members and volunteers coming to ARCAS, who are trained in bird watching. Immobile counts, or short distance counts are conducted most of the times. Most commonly seen bird species are: green heron (*Butorides virescens*), great egret (*Ardea alba*), snowy egret (*Egretta thula*), little blue heron (*Egretta caerulea*), great-tailed grackle (*Quiscalus mexicanus*), sungrebe (*Heliornis fulica*), great kiskadee (*Pitangus sulphuratus*), social flycatcher (*Myiozetetes similis*) and belted kingfisher (*Ceryle alcyon*).



Fig. 2 From the left: little blue heron (*Egretta caerulea*), tri-coloured heron (*Egretta tricolor*), great egret (*Ardea alba*)

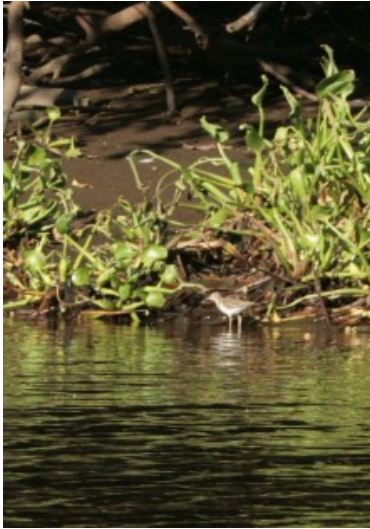


Fig. 3 Semi-palmated sandpiper (*Calidris pusilla*)

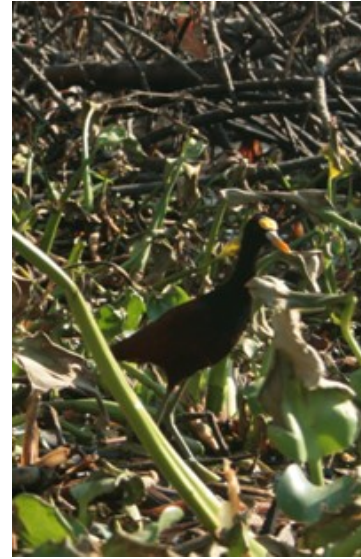


Fig.4 Northern jacana (*Jacana spinosa*)



Fig 5. Tri-coloured heron (*Egretta tricolor*)



Fig. 6 Green heron (*Butorides virescens*)



Fig. 7 Great Kiskadee (*Pitangus sulphuratus*)

Mangrove forest mass monitoring

Four different plots have been marked. First one covered mostly by red mangrove (*Rhizophora mangle*) trees, second by white mangroves (*Laguncularia racemosa*), third by black mangrove (*Avicenia germinans*), and fourth by young mangrove of mixed species.

Each plot has a rectangular shape and is 400 square meters in area (20m x 20m). On each square/plot all mangrove trees have been measured (height, diameter, tree bark thickness) and all abnormal or dead trees have been reported. Tree measurements are being taken every 3-4 months to estimate average growth rates of each mangrove species.