

Note the following pictures have been provided by Dr. Carlos Lopez, and Biol. Wilfrido Cabezas – (fish species and some other photos have been downloaded from the internet) – M. Festivum at Pozo Azul was taken by Dr. K. Arendt. You can relate these photos to the descriptive document, also attached in the post.



Rio Negro Creek Biotype
(True blackwater creek)



A bog in the Llanos – frequent source or section of a Caño Llanero. Altum fry and small specimens are frequently found here (*here the entire surface is covered with duckweed, open water far in background just before forest - beware Anacondas and Alligators*).



Pozo Cristal - Upstream



A Map of Venezuela showing the Orinoco

(P. altum has been reported from La Paragua and Ciudad Guayana in the North to Rio Negro, extreme south, not shown in this map)



This Map Illustrates the entire Orinoco Basin showing the Guaviare, Atabapo, Inirida, Guainia, Vichada and Meta coming in from the West in Colombia. The Arauca and the Apure, also come down from the West, but in Venezuela (All these West born rivers come down from the Andes). On the East side of the Orinoco, coming in from Venezuela we have the Atabapo, Ventuari, Caura and Caroní. These East born rivers are born in the Guyana shield. The blue area indicates the Atabapo Region.

In this illustration you see a bifurcation to the south of the Orinoco which connects to the Guainia. This the is Rio Casiquiare, the main waterway connecting Amazonia and Orinoquia. The Rio Negro is that bifurcating to the South from the encounter of the Guainia and Casiquiare.

Altum abounds throughout these waters and into the Upper Rio Negro (not shown in map). Only the major tributaries are shown.



The Casiquiare flows in a Northeast to Southwest direction into the Rio Negro from the Orinoco. The Guania comes in from Colombia and meets the Casiquiare at the mouth of the Upper Negro.



Map of the Casiquiare. It is through this unique pathway that Orinoco fish enter the Negro/Amazon river system



A Southbound Caño Llanero creek in the dry season (*note the still, not so in the rainy season*)



Pozo Azul upstream (*note the current*).



**Another Caño Llanero (Caño Manteca) type creek, perfect brew for Altum...
Note the crystal clear dark tea color of the water, Altum inhabits both clear water
and this type of clear blackwater.**



A clear water creek of the Ventuari system, almost identical in water quality to the Pozo Azul biotype further North.

Mesonauta festivum var. Insignis

(previously classified in Genus *Cichlasoma*)

This fish is found in almost every Altum hole. They would be prime time company and help your altum feel at home.



Note the beautiful contrast of the silver blue dorsal area and bright yellow pectoral/ventral, not the common festivum you see at pet shops.



A higher volume Caño Llanero just off a major tributary in the Bajo Orinoco, a remanso in the foreground.



A group of *M. festivum* sunbathing at Pozo Azul.

Altum will rather stay in the upstream shade and among root outshoots or fallen tree trunks and branches.



**Pozo Azul in the Dry Season –
Note how clear the water is in this biotype.**



Apistogramma iniridae

Another cichlid that will fit right in with Altum. A. Iniridae grows to about 2 inches, is graceful, peaceful and will breed readily given soft acid water. I have bred this fish several times, fry are easy to take care of.



Apistogramma bifasciata

Closely related to the *A. Cacatuoides* which lives further South, this is another species found in the Altum biotype. Likes to breed under rocks or in crevasses in the driftwood, same as *A. Iniridae*.