The ultimate in 'hosted' angling adventures throughout the Amazon.
UK Agent and Promotional Management for **Amazon-Angler.com**
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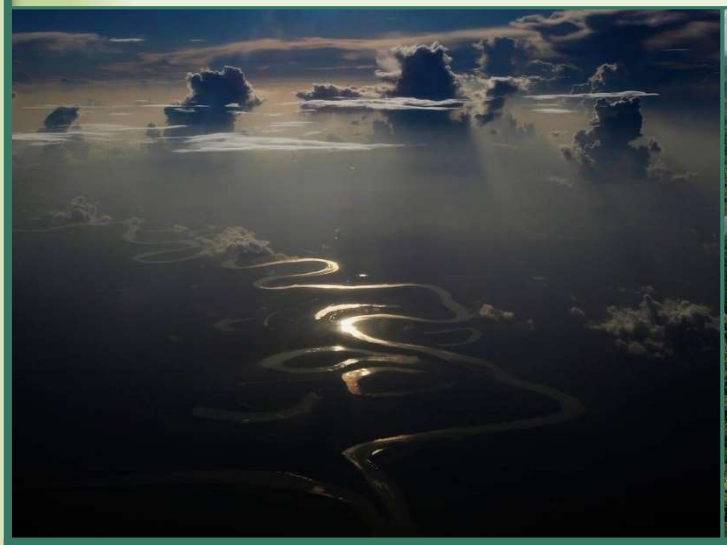
Understanding the Rivers of the Amazon

In many of our publications, whether on our website or through our social media, we reference terms relating to the physical characteristics of rivers and river systems. This publication helps put some of those terms into perspective, shedding a little light on what they mean and where possible, through providing examples. This will hopefully give you a little more insight into the waters of this incredible part of our planet… and who knows, you may soon be a part of it!!



A Few Common Terms

Headwaters: The headwaters of a river are the smaller streams near its source, which combine to form the main river.

Watershed: Refers generally to an area of land that contains a common set of streams and rivers that all drain into a single larger body of water.

Discharge: Described as the volumetric flow rate of water that is transported through a given cross-sectional area. It includes any suspended solids, dissolved chemicals, biologic material in addition to the water itself.

Drainage Basin: Refers to any area of land where precipitation collects and drains off into a common outlet, such as into a river, bay, or other body of water. That includes surface water from rain runoff, streams that run downslope towards the shared outlet, as well as the groundwater underneath the earth's surface.

Tributary or Affluent: Is a stream or river that flows into a larger stream or main stem (or parent) river or a lake. A tributary does not flow directly into a sea or ocean.

Floodplain: Is an area of flat land alongside a river. This area gets covered in water when the river floods. Flood plains are naturally very fertile due to the river sediment which is deposited there.

Várzea: Defined in greater detail in the 1970's, a Várzea is generally described as a seasonal floodplain forest, inundated by whitewater rivers that occur in the Amazon biome. Várzea forests are further split into low (flooded >50 days pa), and high (flooded <50 days pa).

Igapó: A word used in Brazil (Portuguese pronunciation) relating to a seasonal floodplain forest, inundated by blackwater and / or clearwater rivers that occur in the Amazon biome.

Confluence: A confluence is a river which is formed when two or more rivers combine to form a single channel of water.

Lotic: Refers to flowing water, from the Latin *lotus,* meaning washed. Lotic waters range from springs only a few centimetres wide to major rivers kilometres in width.

Lentic: Refers generally those which involve relatively still terrestrial waters such as lakes, lagoons, ponds, and wetlands.

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Whitewater, Blackwater & Clearwater, what's the difference?

Whitewater Rivers

Whitewater Rivers: *Note: These rivers have nothing to do with rapids and rafting!!*

Whitewater rivers have high sediment and nutrient loads and generally have a neutral pH. They drain soils formed on sediments from the Andes, which in geological timescales are a relatively new mountain range. Heavy erosion causes the rivers to be loaded with a large volume of suspended solids, often giving them a pale muddy appearance.

Examples include: the Marañón (Peru), Meta (Colombia and Venezuela), Madeira (Brazil & Bolivia) and Napo (Ecuador and Peru) rivers.

Blackwater Rivers

Blackwater Rivers:

Blackwater rivers have a low sediment load, a low pH (acidic) and are often a heavily tannin-stained colour They drain sandy soils that originate from an area known as Guiana Shield, a remnant of an ancient mountain range. Millions of years of erosion have left only the hardest of rocks behind, yielding little in mineral value.

The presence of dense surrounding forest helps compensate for the rivers lack of nutrients, although this can further darken the water through the slow decomposition of leaf matter and the subsequent release of their acidic compounds. *cont...*

Blackwater rivers cont...

These rivers also tend to be slow moving, going through forested swamps and wetlands, causing the characteristic black colour. Note: that not all black rivers are blackwater rivers. Some rivers have a black colour because they flow through areas of dark black loam or just because the soil is black. The colour alone doesn't make the river a blackwater river.
Examples include: the Atabapo (Venezuela and Colombia), Negro (Colombia; Venezuela; Brazil) and Tefé (Brazil) rivers.

Clearwater Rivers

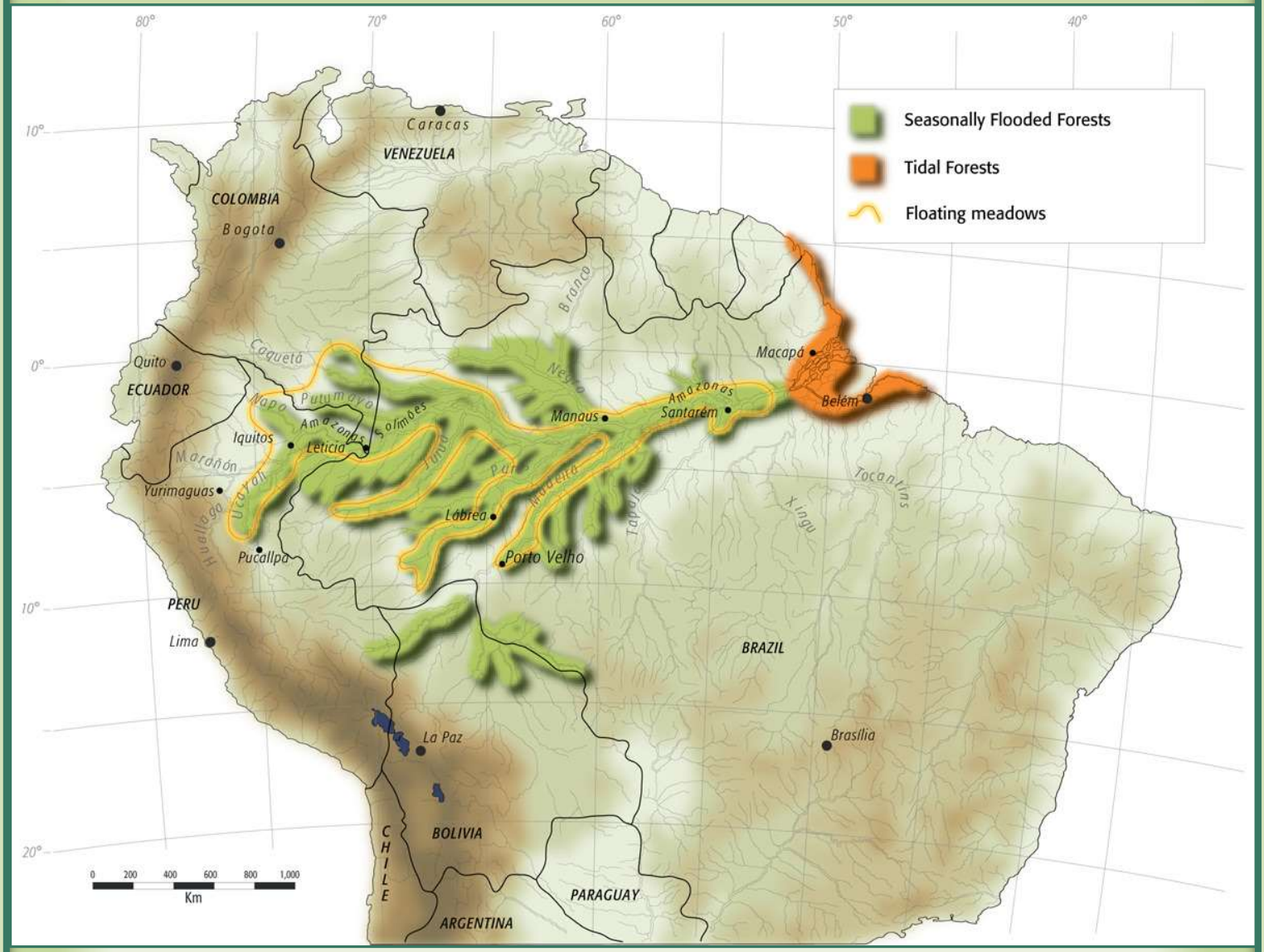
Clearwater Rivers:

Clearwater rivers have a low sediment load resulting in increased transparency and a neutral pH. They drain sandy soils in the interior of lowland rainforests and the granites of the Brazilian Shield (Similar in age etc to the Guiana Shield) however, they are not as nutrient poor and as such, vegetation produces much fewer protective compounds, leading to higher rates of decomposition and the waters increased level of transparency.
Examples include: the Xingu (Brazil), Tocantins (Brazil), Tapajós (Brazil) and upper Orinoco (Colombia) rivers.

Confluence's

Picture 1. The **Meeting of Waters** Portuguese: *Encontro das Águas* is the confluence between the dark (blackwater) Rio Negro and the pale sandy-coloured (whitewater) Amazon River, referred to as the Solimões River in Brazil upriver of this confluence. For 6 km (3.7 mi) the two rivers' waters run side by side without mixing.
This phenomenon is due to the differences in temperature, speed, and water density of the two rivers. The Rio Negro flows at near 2 km/h (1.2 mph) at a temperature of 28 °C (82 °F), while the Rio Solimões flows between 4 and 6 km/h (2.5–3.7 mph) at a temperature of 22 °C (72 °F).
The phenomenon is common in the Amazon and occurs on a smaller scale in the locations of Santarém (Brazil) Iquitos (Peru) and the Cuyuni and Mazaruni rivers (Guyana). Pictures 2 and 3 show examples of similar confluences.

Floodplains



Floodplains are areas of flat land alongside a river. These area's gets covered in water when the river floods. Floodplains are naturally very fertile due to the river sediment which is deposited there. Floodplains of the Amazon are a mosaic of habitats that include levees, lakes, dried lake beds, swampy depressions, sand or mudflats and gently inclined slopes. Depending on exact elevation, habitats range from permanently aquatic to nearly permanently terrestrial. The two main types of vegetation found on floodplains are forests and floating meadows. Forests subject to inundation are found on the floodplains of all types of rivers. Those of the whitewater rivers are referred to as várzea forests and those of the blackwater and clearwater forests are usually called igapó forest.

Floodplain forests represent between 3-4% of the Amazon Basin area and are highly productive riverside areas that are flooded during the rainy season, and which receive rich sediment from the Andes mountains. These factors have resulted in the evolution of ecosystems and habitats with a high number of species.

The várzea floodplain environment contains the most important fishing habitats in the Amazon Basin.

This annual phenomenon forms the most extensive system of riverine flooded forests on Earth - a drastic revolution in the landscape that is vital for the efficient functioning of the Amazon River Basin.

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The Amazon
It's Rio's and Tributaries

Many of our fishing trips are located on one or more of the countless 'rivers & tributaries' which form part of the main Amazonian watershed, i.e., Rio Negro, Rio Juruena etc, so here's a useful guide to where these are in relation to the main river (See map).

The Amazon river flows from headwaters in the towering Andes, crosses vast rainforests, meanders through the lowlands of Brazil, empties into a massive delta, and then discharges into the Atlantic Ocean.

It traverses lands so vast and remote that measuring its length has proved a formidable task. Along the river's route some 13 major tributaries carry the waters of Amazonia into its path, creating South America's greatest river and by many accounts the longest river in the world (questionable)….

The Amazon has over 1,100 tributaries, 17 of which are over 1,500 kilometres (930 mi) long. Here's a list of some the more notable ones.

The AMAZON River
6,259.2 km (3,889.3 miles) to 6,712 km (4,171 miles)

- 3,250 km (2,020 mi) – Madeira, Bolivia/Brazil
- 3,211 km (1,995 mi) – Purús, Peru/Brazil
- 2,820 km (1,750 mi) – Japura, Colombia/Brazil
- 2,639 km (1,640 mi) – Tocantins, Brazil
- 2,627 km (1,632 mi) – Araguaia, Brazil (tributary of Tocantins)
- 2,400 km (1,500 mi) – Juruá, Peru/Brazil
- 2,250 km (1,400 mi) – Rio Negro, Brazil/Venezuela/Colombia
- 1,992 km (1,238 mi) – Tapajós, Brazil
- 1,979 km (1,230 mi) – Xingu, Brazil
- 1,900 km (1,200 mi) – Ucayali River, Peru
- 1,749 km (1,087 mi) – Guaporé, Brazil/Bolivia (tributary of Madeira)
- 1,575 km (979 mi) – Içá (Putumayo), South America
- 1,415 km (879 mi) – Marañón, Peru
- 1,370 km (850 mi) – Teles Pires, Brazil (tributary of Tapajós)
- 1,300 km (810 mi) – Iriri, Brazil (tributary of Xingu)
- 1,240 km (770 mi) – Juruena, Brazil (tributary of Tapajós)
- 1,130 km (700 mi) – Madre de Dios, Peru/Bolivia (tributary of Madeira)
- 1,100 km (680 mi) – Huallaga, Peru (tributary of Marañón)
- 1,050 km (652 mi) – Jutai, Brazil (Amazonas)
- 760 km (472 mil) – Trombetas, Para Brazil
- 1,184 km (736 mi) – Javary, Brazil/Peru Amazonas
- 500 km (311 mi) – Jandiatuba, Brazil Amazonas