

Geographic Society of Lima

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Press Release

THE AMAZON RIVER WITHOUT SECRETS

Geographic Society of Lima resolves controversial hypotheses concerning the source of the Queen of all Rivers

The mystery concerning the sources of the Amazon River, similar to the one concerning those of the Nile, has long been subject to never-ending speculations and academic disputes. The identification of the main river's source section poses many difficulties for researchers, as all the hydrological criteria are rarely met at the same time. In the case of such a vast hydrographical system and such an important water artery as the Amazon River, the complications increase even more.

Hydrologists believe that the stream which runs the most water, which is the longest, and whose source lies highest above the sea level should be considered the main river. Equally important are criteria concerning the riverbed gradient, the basin activity or the morphology of the terrain. Also, the importance of culture is unquestionable. Sometimes the traditions preserved through history and the culture of a region are arguments influencing the choice of the main river.

Since the time of Humboldt, the Marañón has been considered the source tributary of the Amazon River. In 1934 the geodesist Colonel Gerardo Dianderas formulated the insight that it would rather be the Ucayali as it is longer, of higher importance to the history of the region, navigable to a greater extent, and as it plays a more important economic role. Moreover, its basin is more extensive. This thesis has later gained the acceptance of geographers.

Since the middle of the last century, in Cordillera de Chila in the province of Caylloma in southern Peru there have been many passionate adventurers who, without taking measurements, formulated vague identifications of the supposed source. In 1969 the famous geographer Prof. Carlos Peñaherrera del Águila, without having taken the trouble of visiting the region, announced that the discussed spot is located on the Nevado Mismi, where the Carhuasanta has its beginning.

Two years later, after analyzing the maps, cartographers from the „National Geographic Magazine” came to the conclusion that exactly on this spot there would be the part of the Amazon River most distant from its mouth. The editorial staff sent Loren McIntyre who, without taking any measures of the watercourse in the source area, affixed his seal to the idiosyncratic interpretation of the cartographers. Already in the following year, the American magazine noted this fact on its maps. Soon, also Jacques Yves Cousteau accepted this view, taking it for granted.

Authoritative specialists however, have never accepted this hypothesis. They criticized the lack of complex measurements, indispensable for identifying the actual source. An institution as prestigious as the „Encyclopaedia Britannica” has cautiously restrained itself to the lapidary short version: „...the river has its source high in the Andes, at a distance of 100 miles from the Pacific Ocean.”

In July 1996 the scientific expedition „Amazon Source ‘96”, led by the journalist-explorer Jacek Palkiewicz, member of the prestigious Royal Geographical Society in London, undertook a series of hydrological and geomorphological observations and examinations that allowed for the resolution of the enigma of the Queen of Rivers’ controversial birth place. Among others, head of scientific research engineer Zaniel Novoa and Admiral Guillermo Faura Gaig, author of a monumental monograph on the Amazon River, took part in the expedition. The expedition took place under the patronage of the vice-president of the Republic of Peru Riccardo Marquez Flores.

Starting from the main flow of the Apurimac, the researchers moved upwards along the basin, eliminating in each branching the secondary flow on the basis of the above mentioned criteria. This allowed for determining the Apacheta spring as the beginning of the Amazon River.

In comparison with the rivaling Carhuasanta spring that has its beginning on Mismi Peak (10 km away) it presents only two equal parameters: a similar length and a similar height above sea level. As engineer Zaniel Novoa argues in his publication for the Pontifical Catholic University in Lima „The Source of the Amazon River” (1996), the remaining parameters are in favor of the Apacheta, which has a higher flow rate, a better developed basin (more tributaries), a higher hydrological activity (relative flow-through, expressed in liters/sec./km² of the basin), a lesser gradient in longitudinal profile, a more clearly formed and carved riverbed. The carving of the valley indicates the river’s elongation at the place of its estuary leading to Lloqueta. Significant is also the fact that it was the Apacheta Valley that constituted a historical communication route of the Incas through the main watershed Kechua living in this area confirm that the Apacheta carries water during the whole year and that it was like this as far as their memory reaches.

In light of the above mentioned arguments, for today, one can speak of the dominating role of the Apacheta spring, which constitutes the beginning of the world’s largest river. Concluding, the beginning of the Amazon River is the Apacheta which flows from the Quehuisha Mountain (latitude 15°31’05” S and longitude 71°45’55” W, height 5170 m a.s.l.) lying in the main water shed.

Yet, the birth place of the Amazon River gave rise to lively polemics in the last few years. A Czech geographer considered himself a new discoverer without having taken any measurements. Lately, in 2000 an expedition under the auspices of the National Geographic Society noted that the Carhuasanta stream is longer. Basing solely on fragmentary observations, i.e. restraining itself only to classification according to length, it announced that the source is located on Mismi. Understandably, such theory cannot present a scientific value. The expedition has accredited itself the patronage of Geographic Society of Lima, a claim that deviates from the truth, because said institution didn’t have a representative in the expedition and neither did it confirm the results.

The Managing Board of Geographic Society of Lima acknowledges the scientific value of the report presented by the expedition led by Jacek Palkiewicz as the most important research done on the source of the Amazon River and it

obligates itself „to propagate this result among every geographical institution in the world as well as the international community.”

In connection with the question of the Amazon River's source, Geographic Society of Lima expresses its opinion on the equally discussed question of the river's length.

Many sources declare that its total length, taking the south channel of the delta into account, amounts to 6.750 km, which surpasses the length of the Nile by 79 km. Though some more cautious geographers defend the thesis that the southern part of the delta belongs to the independent river Pará with its tributary Tocantins and that it should not be taken into account as a part of the Amazon River's basin. On the other hand, the reputable geologist Prof. Azis Ab'Saber claims that „because of the complex hydrology and geomorphology both mouths of the Amazon River (differing by 302 km) should be treated as equal.”

A significant contribution to specifying the length of the Queen of all Rivers was made by researchers from the Instituto Nacional de Pesquisas Espaciais, a Brazilian Cosmic Science Institute in São José dos Campos, in 2005. Paulo Roberto Martini, conducting teledetectional research of the measurements taken by the Landsat satellite and taking the results of the „Amazon Source '96” expedition as a basis, counted that the Amazon River's length amounts to 7.040 km and the Nile's length to 6.857 km. A similar length (7.000 km) was advocated by the geographer Prof. Carlos Peñaherrera del Águila already 40 years ago, and later also by Jacques Yves Cousteau (7.025), among others.

Polish Prof. Jerzy Makowski rightly observes that all these numbers do not present a scientific value, as they refer only to the time period when the measurements were taken. Flowing through the great alluvial valley, the Amazon River frequently changes its main bed. As Admiral Faura (1966 r.) has pointed out, it is a typical anastomosing river, flowing sometimes in deep beds, snake-like between permanent islands. Moreover, the stream constantly forms new meanders, which move or are being cut off. The river constantly changes the direction of the bed and stretches or shortens its length even to hundreds of kilometers. Basing on an analysis of photographs and satellite pictures over the period of several years, hydrologists formulate the point of view that the Amazon River has an approximate length of 7000 km. This is totally sufficient to ensure its primacy over the Nile and the Kagera (in their longest versions), even during the rain period when at the time of flood the river runs „cross-country”, shortening its course.

Another fact confirms the Amazon River's hegemony. The lengths of the above mentioned rivers were specified on the basis of maps of different exactness. Seen on a map with a scale of 1:250.000 the Nile has a length of 6.468 km, whereas on a map with a scale of 1:100.000 it has a length of 6.671 km. The Amazon River has been analyzed on a map of little exactness (1:1.000.000) because there had been no other maps available where its flow would be highly generalized. On this map the length amounts to 6.516 km. Unlike the Nile with its straight course, the South American river makes a lot of looping bends. Geographers think that if the lengths of both rivers were to be determined according to a scale of 1:100.000, there wouldn't be any doubt that the Amazon River is definitively longer.

Out of the above mentioned considerations there is no reason to uphold the old thesis about the Nile being the longest river in the world.

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