Irrawaddy River

D’Anville, in the middle of the eighteenth century, considered it as identical with the Tsanpoo which flows through Thibet from west to east, and in Dalrymple’s map which accompanies Symes’ "Embassy to Ava" the Tsanpoo is shewn as one of its sources, but the junction of the two is indicated by a dotted line to mark that the connection between them is uncertain.

In 1825 Klaproth adopted another idea, viz., that the Irrawaddy was a continuation of the Pinlaing-kiang which, after flowing through Western Yunau, entered the valley of the Irrawaddy at Ba-mhaw.

Even as late as 1854 Dr. McClelland, in a note on the discharge of water by this river, wrote that “making all allowance for the extravagance of Burmese historians there is enough in the authenticated history of the country to shew that great armies have passed and repassed to and from China. Besides which the Chinese characters of the boats and houses of Burma, together with some of the ceremonies of the people, suggest a more immediate and direct intercourse with China on the part of the Burmese than any other nation on the western side of the Himalayas, so much so that I have often heard it surmised by our officers at Prome, as one way of accounting for the resemblances, that the Irrawaddy probably flows from China, not that it was supposed to be navigable to that extent, but that its valleys may afford comparatively easy passes between the two countries.”

After noticing the discoveries of Lieutenant Wilcox and that geographer’s opinion that the source of the Irrawaddy is in the Khamtee country, three hundred and sixty miles above Ava, he adds "there can scarcely be a doubt that it must necessarily have a more extended course, more especially as it has been traced two hundred miles above Ava without observing any perceptible difference or diminution of size."

In 1827, Lieutenants Wilcox and Burlton made a determined attempt to reach the sources of the Irrawaddy and they satisfactorily proved that the Tsanpoo was the upper portion of the Dihong and was not connected with the Irrawaddy at all. The result of the explorations of these officers and of others has been to shew, as conclusively as can be shewn until the river is traced to its source, that it rises in the southern slopes of the Patkoi mountains, one branch in 28° N. Lat. and 97° 30’ E. Long, and another in the same mountains a few days’ journey further eastward, the two, that to the west called by the Burmese Myit-g-yee or "Large river" and that to the east Myit-nge or "Small river", uniting to form the Irrawaddy in about 26° N. Lat.

Drs. Griffith and Bayfield and Captain Hannay shewed that Klaproth’s idea was erroneous, for they personally visited Ba-mhaw and found that the Ta-peng, the stream which enters the Irrawaddy at that town, was navigable only for small boats and was but an insignificant tributary of the great river which flows here, 250 miles above Ava, in a broad stream intersected by islands (one channel alone between Ba-mhaw and the island lying opposite to it being 800 yards across) and navigable for steamers of light draught. If anything further was necessary it was furnished by the party under Major Sladen which visited Yunan in 1868 and followed the Ta-peng through a great portion of its course.
Dr. Griffith found that the Irrawaddy where it receives the waters of the Mogoung stream above the first defile was about 600 yards broad.

If Lieutenant Wilcox is right this point is 200 miles from the source and the area of country drained by the river here about five and a half square degrees; at Ava 185 square degrees; at Prome 31 square degrees; and at the head of the delta 322 square degrees.

The principal affluents are the Mogoung from the westward, which throws its waters into the main stream in 24° 50', the Shwe-lee which joins it from the east in 23° 40', and the Kyeng-dweng which unites with it from the west in 21° 30'.

The general course of the river is north and south. Shortly after leaving the mouth of the Mogoung, where, as has already been stated, it is 600 yards broad, it enters the first or upper defile. Here the greatest breadth of the river does not exceed 250 yards and in all the bad places is contracted to within 100 and even 50. In the places above referred to the river rushes by with great velocity while the return waters, caused on either side by the surrounding rocks, occasion violent eddies and whirlpools so as to render a boat unmanageable and if upset the best swimmer could not live in these places.

When the river is at its lowest no bottom is found in many places even at 40 fathoms.

At Ba-mhaw a short distance below the defile, it receives the waters of the Ta-peng from the east and then, after a long bend to the westward, turns south again and enters the second defile.

This though not so grand as the first is exceedingly picturesque; the stream, greatly contracted, winding in deathlike stillness under high bare rocks rising sheer out of the water.

Still lower down, and not far from Mandalay, is the third or lowest defile. In this there are none of the dangers of the first and none of the rugged beauty of the second, but the banks are covered with dense vegetation sloping down to the stream and with occasional almost perpendicular but wooded heights, afford a pleasing picture, its softness contrasting with the grand and striking scenery of the first and second defiles.

Except when the river is at its highest and the current consequently rapid and strong the navigation of the two lower defiles is easy and safe for all but very long steamers.

Below this third defile the valley of Ava may be said to commence. It lies entirely on the east side of the Irrawaddy, the range of hills which terminates at Sagain opposite Ava hemming the river closely in on the west.

At the lower end of the valley comes in the fine stream of the Myit-nge.

Just above this the great river contracts from a mile and more in width to about 800 yards, in passing between the rocky roots of the Sagain hills, and an isolated temple-crowned eminence on the left bank.

At a very short distance below Tsa-gaing the river takes a sharp turn to the westward and, after flowing in this direction for about 40 miles to Tseng-dat, it gradually comes round to the south again, receiving the waters of the Kyeng-dweng from the westward near the southern extremity of the sweep.

From this point its course is due south for a considerable distance when, deflecting, it runs about south-west to Tsa-lay-myó. From this point its course is, roughly, east-south-east to
the British frontier which it crosses in 19° 29' 3" N. and 95° 15' E., having then a breadth of three quarters of a mile.

Continuing east-south-east it rapidly widens and opposite Thayetmyo, about eleven miles lower down, is nearly three miles broad.

Below this it contracts and flowing between bold and densely wooded banks it passes Prome 48 miles further south and takes a great bend round to the west and then east-south-east again, the hills receding on both banks and the stream broadening considerably till, at Akouk-toung, a few miles above Myaung, a spur of the Arakan hills juts down to the river and ends abruptly in a precipice some three hundred feet high. Here the river enters the delta the hills finally receding and giving place to low alluvial plains formerly inundated for miles on both banks every year on the rise of the river but now protected on the west by extensive embankments.

In about 17° 19' N. it takes another and sharper bend to the west, almost immediately returning to its former course and as it does so throwing off to the westward its first branch, the Bassein river.

Gradually trending round westward, it a little north of 17° sends off a branch eastward, the Panhlaing creek, which joins the Hlaing just above Rangoon, the two forming the Rangoon river. In 17° the Pan-ta-naw leaves it to the west, and from this point the main river runs due south till, a few miles further on, it throws off a stream, which eventually reaches the sea as the To or China Bakir, and inclining westward breaks into numerous creeks.

From 17° N. it divides and sub-divides, recommunicating on each side with the streams which have already left it, and converts the whole of the lower portion of its valley into a network of anastomosing tidal creeks till it reaches the sea by nine principal mouths including on the west the Bassein river and its eastern entrance the Thek-ngay-thoung and on the east the Rangoon, the others and intervening ones being, from east to west, the To or China Bakir, the Pya-poon, the Kyoon-toon, the Irrawaddy, the Pya-ma-law and its western branch the Pyeng-tha-loo, and the Rwe, all of which, as already stated, intercommunicate by numerous channels.

The eastern and western are the only ones used by seagoing ships, but a portion of the To or China Bakir is used by river steamers and large boats going from Rangoon to the Irrawaddy during the dry season when the route used during the rains, via the Pan-hlaing or via the Kook-ko, is closed for want of water, and others are traversed in places by boats and river steamers passing inland between Rangoon and Bassein.

This maritime delta, the protuberance of which has been caused by the deposition of the immense quantity of silt brought down by the river and which in this manner is still encroaching on the sea, is, especially in its lower part, cut up into an infinity of islands by a vast labyrinth of tidal creeks and channels.

Within the full tidal influence these are lined with mangrove thicket and forest of Htien and other brackish-water loving trees, or a fringe of gigantic grasses, and for a considerable distance inland bear the peculiar and unmistakeable appearance of all tidal creeks: the banks steep for a few feet from the top, then shelving and muddy, the top either bare or covered with grass or tall black-stemmed trees with no undergrowth, or with low shrubs, the lower branches bearing, in their mud-covered leaves, evidence of the rise and fall of the tide.

Scattered along the channels and sheets of water in the extreme south, are, during the dry season, temporary villages occupied by salt boilers and makers of nga-pe or fish paste.
A little more inland, patches of cultivation appear gradually passing into extensive tracts.

The total length of the Irrawaddy from its sources to the sea is about 900 miles, the last 240 of which are in British territory, and considering its few windings its development in this latter distance may be about 50 miles.

As far down as Akouk-toung in the Henzada district its bed is rocky but below this sandy and muddy. It is full of islands and sandbanks, many of the former and all the latter submerged during the rains. New sandbanks are continually forming and old ones being removed, and the deep channel changes in many places every season and in some places even oftener but the course of the river, flowing as it does everywhere except in the delta between high banks, alters inappreciably.

Its waters are extremely muddy and the mud is carried far out to sea. It commences to rise in March, some months before the rains set in, but whether owing to the melting of the snows in the mountains in which it takes its rise or to heavy rains at that season in the extreme northern portion of the country which it drains, or to both causes, is not yet known.

Certain it is that as high as Ba-mhaw it rises before any rain has fallen there. It rises and falls several times till about June and then rising pretty steadily it attains its maximum height about September at which time it is, at Prome, from 33 to 34 feet above its dry season level, and at this period, below the latitude of Myan-oung inundates a vast tract of country on the east and unprotected bank.

Several and differing calculations have been made of its discharge: those by Lieutenant Heathcote from data obtained near Tsa-gaing in October gave 316,580 cubic feet per second; those by Dr. McClelland from data obtained at Prome in April 1853 when the river was about five inches above its lowest gave 105,794 per second; Mr. Login calculated it at 75,000 cubic feet per second at the head of the delta; whilst from careful observations and calculations made at Myan-oung by Mr. Gordon the flood maximum discharge in August 1872 was 1,442,007 feet and the mean velocity 6,451 feet.

The river is navigable at all seasons by steamers of light draught as high as, and probably beyond, Ba-mhaw, and during the dry season for steamers drawing six feet as far at least as the frontier. In the rains steamers and large boats enter the main river from Rangoon by the Pan-hlaing or the Bhaw-lay creeks, but during the dry season they have to descend the Rangoon river for some distance and, passing through the Bassein creek (not to be confounded with the Bassein river), enter the Irrawaddy through the To or China Bakir. At this season the entrance of the Bassein river from the Irrawaddy is entirely closed by a large sandbank but in the rains steamers can pass up and down by this channel. The tide is felt as far up as Henzada and at Poo-zwon-doung it rises 18 feet at springs.

Its principal affluents in British territory are the Ma-htoo (or Meng-doone), the Ma-de and the Tha-lai-dan from the west, and the Kye-nee, the Bhwot-lay and the Na-weng from the east.

Below Akouk-touug on the west and Prome on the east it has no tributaries of any importance.