Volume 4th

Survey of the Upper São Francisco by the Comissão Hidráulica 1879.
Sunday Nov 23rd 1st. da Pituba

10, 43 Running between Osaka and L.B. Channel about 500 ft. wide. Current 2 miles an hour.

\[
\text{Cq/V} \times 25 = 15,000 \times 17.6 = 2,640,000 \text{ Cq ft per minute, deaming down this channel to day.}
\]

\[
\text{Of course a quiet deal of water is foaming down in the other widi Channel. Cannot tell how much.}
\]

This channel widen at upper end of Island & about 250 meters. No curb on either side. Island is heavily wooded near upper end.

11, 01 Opp. Upper end \& 2nd. da Pituba. One minute the 100 meters below Upper end of Island.

The Island is cutting slightly at upper end. Current here 2 1/2 miles an hour. Some dry land mixed with sand. The action of waves sandy, and it is being cut away. We ran about 3000, about three. Then to the head.

There are large, and island form on R.B. off upper head of Island. Not to be attempted, I think. The move is as good as I could make it.

11, 05 Nothing down the large R.B. Channel. No sign of the canal entrance as on looking up at the lower end of Island.

11, 08 Opp. Reacho (chief) on L.B. uncultivated. The R.B. Shore is fringed with uncultivated land, bar growth, hiding all that is behind.

[\text{Pitubinha, I do not see.}]

Island a mile ahead; 2nd. da Cabeça.

11, 15 Opp. Cult on R.B. a Frome or island.

11, 24 [\text{Leaves Channel.}]

11, 36 Opp. Lower end of 2nd. da Cabeça. We pass the R.B. (or wide side) Close to 35 of Island.
Sunday Nov. 23 1.a de Cabeça
on L. 102.

11.45 A fine clear, splendid day ahead!

12.04 Opp. at time upper end of Sand spit head of Cabeça Island. It is much as the Map shows - clear now - 1500 ft. and narrowing more above.

12.22 Run 1600 ft. wide. No cult. cult. wide.

I. 101.

Looking right on both sides of I. de Rio das Raás - You will note that the L.B. side is embarranced with Sand bars. - It is clear.

In narrow channel, while the R.B. side is.

But little water seems to come down L.B. side. I have no doubt that is low water it is one year since now 2.5 years after Harriet's map was made.

12.35 Opp. lower pt. of I. de Rio das Raás

12.40 In fair clear Channel 1000 ft. 12 minute by run sounding. The current about 1/2 mile an hour. √1000 × 35 × 132 = 4620,000 cubic ft. per minute.

Which upon is within 20 per cent of the equation. That is the actual quantity is not likely to be 20 per cent less 20 per cent too.

We then side of channel in cutting - and probably have been little change here for 25 years.

12.44 High, clayey toos bank - 20 ft. above. The lower land looks as if it had been cleared, but it has many bushes and little trees on it.

I have observed no signs of cult. on the Island.

Sunday Nov. 23 - I. Rio das Raás
on L. 101.

12.56 Opp. ahead - clear now. R.B. shoal.


Barra de Rivacho das Raás.

Cattle and horses on the plain nearby. A nice situation. River - 1500 ft.

There is a large bar on R.B. shore about 3/4 mile of which is now submerged. It has a deep well looking affluent which is about 10 ft. in diameter. This is shown on map as a bar in front of the "Santrador do Rio das Raás.

1.09 About opp. (River) No. Santrador de R. das Raás. The bar on R.B. side continued 1/2 mile farther up.

1.12 Opp. the SAND entrance behind the Ilha de Rio das Raás - This is the head of the Island.

1.19 Opp. upper end of same. About 1/2 mile across.

There is just a little water at this place of the run forming dry on the L.B. side. On further much more be washed away. That channel in low water None runs through here - the map shows correctly.

1.20 A magnificent run ahead! 1600 ft. here.

1.27 Run 1600 ft. Much clay in L.B.

1.28 Opp. Sang the R. B. (Ethnic)

1.29 - I. 100.

1.43 Run 1000 ft. to large bar along R.B. side.

This bar may be decided that it was in R.B. sand is partly covered with growth.

Lowerend.

1.45 Opp. Tazenda Valta de Cima - one good white house and 1 new plantation.

1.49 Another lot of 9 houses - second line.

H. 1901/2 to white clay.


H. 1901/2 to white clay.
Sunday Nov 23, Fazenda Vale

1 p.m.
1.57 Opp. the upper house of the place.
Rocks above have clear water. Some men are above and a deep mass
of red clay on the top bank. Cenado with iron.

1.59 Opp. point on L.B. on which there is a lot
of the exercise as a drying, iron, adding
white, white rock, which may be
only argillaceous - but it looks heavy.

This Volta de Cima is only the
prevailing place along the river. From
the situation. The house, except two or
there are like others.

Beautiful Rio, for a mile ahead.

This red clay formation on top, and
white clay below, continues a Consider-
able distance all the river.

The next also continues high - exceeding 600 ft.
Rio of 1300 ft.

2.15 The bar on Map, on R.B. There is still there
a portion of it is. However, submerged.

2.19 Opp. a depression in L.B. figure a catchment
of cleaning rice - and a house.

2.20

1.99

2.21 Other regular houses. New plantation rice.
Cultivation on top. The house, still present.
The people have more cultivated to.

2.23 Here the peculiar red clay - which clay
formation seems to terminate. Above this
the ordinary clay seems to be continued. Again, the
ordinary clay seem bank, rather low.
and bordered to the edge appear
River 1200 ft. wide. Beautiful above. I
must get sheet no.

2.30 Low grounds on L.B. (vacante) cultivated
in front of higher ground back.

See the Ia do Estreito to migrate ahead.
Print 1199.5 ft.

The map shows a channel on L.B. side.
Presently it shows water as far as I can see.

Sunday Nov 23, Ia do Estreito

11 a.m.

A large bar on L.B. for 1/4 mile below
Obesi to L.B. island channel.

There is a wide water course now on the
L.B. side but my information is from the
genera appearance that it is largely

grey water.

I see the wind of a large bar to a
mile. Note the head carefully.

2.41 Opp. Ft. of Ia do Estreito to 10.00 am.
Others mid is cultivated.

2.48 A grove of Castor beans along near the
river bank - with other cult.' behind.

2.50 River widens to 1200 ft.

Here and shown on Map on R.B.
River a distance from about 3/4 mile above the foot.
It is still more it is submerged now.

3.00 River 1200 ft wide. 300 ft. Meter, free when we run

draft forward and near to, third river.
Current about 1 1/2 mile an hour.

3.02 Opp. a New cleaning on R.B. pretty heavy woods.

3.04 River 1400 ft wide.

3.13 Opp. the Shackle projection of Ia do Estreito,
Classic it comes up to the right to its upstream
a full 1/4 mile to the right.
We run from it near R.B. side. 80 m.

3.18 Bar of low banks on R.B. These low banks are of
loom and the river is cutting them away.
more Castor beans, and Audens cultivation of
body of swamp. 2 2 3. Yes, here a hut, or two.
Two families. Immediately above no cultivation.

3.27

1.98

3.27 Running now nearly parallel with the river.

3.30 Opp. Upper Point of Ia do Estreito.

The water being Gp at least as big as any river, much more water on the L.B. side.
Island, then on Maps.

3.40 Opp. House about 1/2 mile Channel on L.B. side.
Sunday, Nov 23rd on L. 97.

3.40 P.M. looking back down the L. B. Channel behind the Island Estructo Idea. No nothing but water. But it does not appear like a large Volume. At this stage probably in low water. -- water runs through here. May them very bad.


3.52 The red-bay clay begins again, very red. (White clay below)
This channel has cut itself a little wider than it was in Halfted's time. But clay bank cases. O'Leary. Very low small thin. But done little forest in the valley of the red clay, about here.

3.56 So it continues for half a mile up the stream.

3.58 Opp. here the white clay and very white about 1 mile.

Dinner Bell.

4.15 Opp. upper end High clay bank on L. B. side.

4.20 A few houses

4.20 AS B. appears as a curious object in the noon and point, proceeding up stream.

4.25 Run 1200 ft. Middle to Islands on the L. B. High water then second islands.

4.29 The R. B. Banks are about 15 ft above the water, a little cultivation in spots, but very much bank slopes. The corn, friendship as well as I can see them, look very healthy. The woods have a robust healthy color, dense plenty foliage. There are little settlements which do not live in the halfed's time.

Opp. place where R. B. stops Cultivation. We are heading north.

4.51 Opp. a Settlement on R. B. Sees 6 houses. A 1200 ft. nearly where clay bank in front, and wood not far behind, and a boat now below.

4.55 Run within 2 1800 ft. R. B. bank low, again.

4.57 I see another banana tree on R. B. No wood, flowering, and plenty more Cassava. There are all sandy banks about 15 ft above this water.
The sandy, white clay and corn growing deposits along the L. B. are my inquiry.

5.02 We run along 50 miles from R. B. There is a town or a settlement all along here. Run 2000 ft, and corn, and Cassava become frequent.

There seems to be a strip of land about 100 miles.

Between the run and the woods the bank is on the time cutting.

5.17 Opp. when R. B. ceases to cut we are heading north from outside of 1a da Barra.

A bar just out a hundred miles or more from just above the town and the islands. 12 ft. water behind this island. The Channel is probably choked against a low water from

5.22 I. 96.

5.23 Opp. lower end of 1a da Barra: a village daily cult and "1a da Barra"

5.29 Run now over at 1a B. side. 40 meters from shore. (On B. side)

Conceal Channel from this side; 12 ft. water. Banks 12 to 14 ft. no mud badly. Gentle current, much clay than the R. B.

5.39 Opp. Upper end of 1a da Barra, here is a long bar, then the rest of the island, flat above and below. The head - near 1200 ft. from here.

Behind the up end of island there is a stream, and Porta da Barra, very much sand bar in sight in men.
5.45 The Ilha da Barra da Ypoereira is about 400 meters above the upper end of I. da Paratoca. There are low slopes and bar facing the coast (Port of the Island Barra da Ypoereira). I can see the sun with my naked eye.

5.58 Cultivation along river with good crops. We left the river and went to the right where there is a cemetery.

6.00 The Ilha da Barra da Ypoereira is now far below us. Stop here 6:00.

**Barra da Ypoereira.**

We have run 12 leagues to day, without a stop—about a league an hour. It is what the steamer does when she can keep going regularly.

**REPORT.**

The navigation is excellent, all the way. The country is improving in agricultural capability—corn, wheat. Population has not been so thin here as it was some days back; but here, the woodland is new. There is room for more workers. — More settlers.

The people appear to be in better times. However, this is Sunday, and many have not their best day.


6.00 Start from High Bank in 2:00, Bank in 2:00, Bank in 2:00. Bank in 2:00, Bank in 2:00, Bank in 2:00.

6.12 Opp. another large house—near bank.

6.17 Opp. a lot of 8 houses—good, four houses. I passed the upper part of Barra da Ypoereira. We stopped at the lower end of the village.

6.26 We ran near (30 meters) of Island.

**Opp. Upper end of I. da Barra da Ypoereira.**

The map shows only Sand Island, but I cannot see it.

**1.25** about here.

Rumi 1800 ft.

6.38 Sandy beach on R.B. Cutting, Rumi 2200 ft.

6.43 Rumi 2500 ft. in deco. The color is dark; no oblique away from R.B.

6.55 Opp. large pl. of new green island on R.B. Pedro Island. It was a sand bar in Halflet's time.

Sand bars, and Sand Bar Islands, Character.

The R.B. side of the river—along about here.

7.00 High only 1200 ft. judge from L.B. Sand bar.

We are running all round charting 6. 5. 4. 6. Cup.

7.05 16° from L.B. Sandy—clayey bank, 10 ft. a. covering the immediate, oblique at left, toward sand bar. "Coroa de Beira Vista" marked on Map.

Somewhere along here. There is a small sandy bar here, on our right, at an oblique toward 11°. 3 hats—"water buffalo." Fishermen. It is a beautiful place for some fishing.

**1.34** about here.

7.16 The oblique is right, Toward L.B.

7.25 About 100 meters from L.B. 10°, then 75°, 10°. Sandy—clayey bank, 10 ft. a. covering the sand bar island and Sand Islands continue a R.B.
Monday, Nov. 24, 1894.

7:30. We continue to look to windward the R.B. sand bar. Presently, there is no appearance at this stage of the sweep bar on the L.B. side for a league along here which, according to the map, is the L.B. 18 miles down.

7:37. A group of about 150 miles of R.B. sand bar is SW-south of mid-tide.

7:44. About 12 miles upriver, on the Map "Cobra do Pau Vispo," but bar now appears to take the form of a point at R.B. submerged at high tide, float up, and gross, sliding up.

7:45. Heading out into the L.B. River 1200 ft.

7:55. Opp. Upper point of a large sand bar is land.

The river has been continued along.

The river has a steep channel along the R.B. side, partly from the main and partly from the old bar (Map). The river seems to have fallen 2 ft. below where it is.

The river has also collapsed a deep channel on the R.B. side, and the large bar in front of the Tres Ilhas (Map) has worked over toward the location R.B.

8:04. Opp. Tres Ilhas. High clay bank 30 ft. 3 ft. 5 ft. 1st old house visible - but then an unusual bush on the sand bar is land. 2 squares, females appear.

Some fernaceous clay at the foot of the river edge, almost a rich marl. -- some red clay now.

8:06. Opp. where the bank falls off 12 ft. height at Tres Ilhas.

River now 1200 ft. and sand bar is land. Wwds. [no appearance of vegetation now].

Paralleling L.B. 30 ft. to 40 ft. off.


8:18. Opp. Lower end of New sand bar between us and L.B. has some green bushes in it. We're about a half a mile from L.B. It is half mile long.

8:34. Opp. Upper end of this new bar.

8:28. In mid-water I see up river nearly a quarter league from the appearance of the water. The water is actually a water hemmed in on the water side by the distant river.

The map shows straight river all 3 leagues.

I. 93. about

8:27. Opp. Lower end of New sand bar between us and L.B. has some green bushes in it. We're about a half a mile from L.B. It is half a mile long.

9:02. White clay on water edge -- and some fernaceous stuff.

9:05. Opp. A good house - (many people)

9:06. Opp. and Mlle. GRAND HOUSE, with a large wooden cabin on the 1000 ft. high.


Rocky or large stone shown on the right side. Yellow clay bank.


L. 92.

9:27. Opp. Lower end of small island is an old shore.

9:28. In mid-water. I see more, nearly a quarter league from the appearance of the water. The water is actually a water hemmed in on the water side by the distant river.

The map shows straight river all 3 leagues.

I. 93. about


9:59. On the head, clear Map. No more a dreamy aspect of the water. I take a few heads. 1931 appears.

Biscuits do Inferno on R.B. side R. H. W.
Monday Nov 24 1892

9.35 Opp. end of High Clay bank - Low banks above. Some gentle low ground inubicated.

[Angicos has a fine situation - but it has not grown any in 25 years.]

Riv. 1200 ft.

10.05 Vasante - Opp. on R.B. side. Sandy.

10.08 - about -

10.12 The L.B. side - Woods about 20 ft. at low water.

10.28 Opp. Roca - on L.B. 2 5th hour. 2.5 years ago.

We steer toward L.B. 10.30 Paralleling R.B. 1

Beautiful River! straight up 4 miles.

Riv. 1200 ft.

10.50 Obliqueing toward L.B. South shore Woods

11.05 Opp. O.S. Maris 1/2 hour 2 July 1878

Some grass 25 years ago.

11.05 The bar is a pleasant looking place - high

elevations, green banks & pretty trees. It has a home like aspect.

Riv. 1200 ft.

11.05 -


11.27 Large bar - Top of it abrupt. Forest water

on R. B. shore.

11.38 Opp. little clearing in the woods. R. B. shore.

Buraco do Tava (on map) end north a land.

11.45 troops it is one hour back or 4 miles on L.B.

11.45 I have another Wafer horizon -

At least 6 miles up Riv. If it is better than the one of this morning.

1.05 —
Near R.B. side — 4 little plantations on right; along these, on top of the bank 20 fathoms. Round 2000 ft ESE.

Opp. a bar on R.B. side.

1.30 Opp. lower point of Isla Carunhanha. We run now for the town below town end of town.

1.40 —

1.45 Arrived— the sun was 1.47 when anchored.

CARUNHANHA

State — for Seaport town near here.

Handsome situation, on an elevated plateau—40 to 50 feet above the river. The population or a large number live on the high banks, and house their houses on the clay banks.

The channel runs to the island & 1000 ft. or perhaps 300 meters, and deep. 5 meters near shore.

Sr. Amarante negotiated an arrangement for obtaining 4000 sticks, quinine at 8² for M. Le Comte. Some depended partly on getting a barca to bring the wood up from the island.

Wrote a long letter to Sr. Clainio — 25½.

Evening 2.34. (Agec. 50.)

Went through the town — Many houses, a lime-wood church, not a single glass window, a miserable looking lot of ill-mannered sheep, or more buildings — Half a dozen — Incredibly respectable looking houses. No Suberado. Population the same as other. Population of the other towns 1180 poor, 20 good. A glass.


Carmelina on 18. —

Corti. Writing here you may afternoon, one never get exhausted or remain how to lay in a few shots. I have to report a good navigation all the way from Barra to this place. At Corinto I voyage about the town and learned that we would be there for Batata for eight or nine days, and that it sometimes take a month to know Batata. Therefore concluded to bring my letter to this place. Hoping there might be a quicker communication. Here the day bathed in 25. 30 ago. 15º and a wind from 30. Three days, 30º, 15º. The ferry man here.

Reference to my preceding letters I have to add that the Arrosto continues to improve as we advance.

Here, and for some distance below, along the river, there are long canals cultivated to about twelve feet in depth, and are the line of the highest floods; land, estate has been cleared in the canals, and which is very fertile.

The woods are now often clear of forest, such as are not below any where along the lower part of the valley; and the region seems to have been favored with fine moisture. The kind of cultivation is much the same all along the river, where it is all Cominico in the Valley, as it will not as present pay to fight it to the coast.

The towns also are of the same general character. A few is the most interesting place in hairpin; on account of the grand and very peculiar terrain with Mountaint
only needs a pilot who is acquainted with the no, he can read it, note the changes. Our pilot has not been up the river for some years, yet in navigating 157 leagues he has not missed the Channel once, when the sun was shining, directly in his face from the water, and that was caused by false information from a pilot in Nicaucacas. I infer that his character is continue.

From the Villa de Pena Grande to the Villa Caranhanahua has taken 13 days, including all stops, which is at the rate of 1/3 leagues a day. It is 3 leagues from Pena Grande to Caranhanahua. Leaving the 20th of November, we arrived there on or about December 1. The climate is charming, seems to me that persons taking leaves care of themselves might live here to a great age, but the majority do not take such care of themselves, in any particular.

While leaving the United States Life Insurance Company, on which I have been insured about 30 years, without changing one cent on account coming to the San Francisco river, I had written to the President of the Company proposing to change them at ten cents a piece.

The news is that the San Francisco river will bring one of the wealthiest companies of the United States. I hope we can get the Steamer to go.

The Rio Grande is a noble stream, furnished at the time of year, measuring about one sixth of the volume of the San Francisco below its mouth. The current is also a fine river, and is in the Caranhanahua. It has the honors to remain Channel 1300. I wrote to the President of the Company to change them at ten cents a piece, which he did for me, a six month's supply. The Company was to give me 2000 dollars in the United States. The Company is also a fine river, and is in the

Prominent Changes in the Caranhanahua, and main thaws since Halley's time, caused by the action of the water cutting away in certain places and filling up in others. But these changes do not affect the navigation. They only change the position of the channels. Always above ground there is a navigable Channel. W
There is a rumor here that the other little steamers are preparing to come down the river. The is said to be a favor to the men, who are hungry and poor. If that is correct, they can make more money by earning tobacco, than the can by becoming workers in her and running her. Such steamers as these, on the river, cannot be foot-passenger, where it always first-class cargo
men can be had for a little less for day.
From 26¢ to 28¢ per day will have the
steamer (including freight and mens)
map first-class barca-carrying 50
tons, whereas the interest alone is a
lot of money putting its Cor, in the river
of 60,000 yds. 002 in 0.6¢ per day
and the Cor per day of running it
would make little of an interest in the long run. How then could
not the interest Compare with the barca,
or any more, they benefit the battery?

It is said that in order to improve the transportation facilities of this river navigation, more powerful and faster steamers capable of carrying 10 or 12 barca cargoes,
for many days each are indispensable.
Of course, this subject is much discussed,
but it is sound, as far as it goes.

I had a barca that is in poor
condition this morning, the
"Estrella Brillante," which travels be-
tween Guanacaste and Jaco....

She is 20 meters long (66 ft)
4 meters wide (12 ft)
with a draft of about 2.77 (2 ft)
When loaded, the cargo 14,000 Napa, or
6,000 lbs. or 28 tons (2,000 lbs)
These barcas are made of models of
boats, with less little change in the shape,
She will make good cargo for tobacco.
In fact, she barks as the "Estrella Brillante.
back two tom wells, but it is not true.

The steering is a terrible.

The water is clear but a dark greenish
color, a great contrast to the muddy

Carunhanha River - Nov 26

The water is clear but a dark greenish

color, a great contrast to the muddy

The water is clear but a dark greenish

color, a great contrast to the muddy

Write anything after this consultation.
A. P. de Carvalho Borges, Minister
of Foreign Affairs, to the U.S. State.

Col. O. J. James
Rio de Janeiro
My dear Col.

A long letter giving
an account of the Sapa Church
and the Grand Ceremonies in Milan.
The general account of the
new and Country and the Towns.
Some of the things of the day - my
recognition.

The letter also written
further down the river to Cornell of
Van Deus and two letters to
Santos, one of them containing your
directions.

Two letters to Sir. Plinio. Copy page
by Vol. 3.

The measurement of the
Barca
"Estrella Brillante," built at Janahana.

Said to be the largest barca on the river. I think that
the only barca that I saw in Jaco was (in) larger.

as long, or longer, and
deeper - and nearly as wide - not quite.

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish

The water is clear but a dark greenish
Carunhanha—Still Wed. 26

Half a league above this town is the mouth of the Carunhanha River, which we measured yesterday [see p. 9]. This river is the boundary between the provinces of Bahia and Minas.

Opposite the mouth of the river, on the right bank of the S. Francisco River, is N. S. de Rozario da Malhada, in the province of Bahia.

There, is the Custom House—Provincial, for collecting the tax on the commerce passing between the two provinces.

The collector says the amount is about 100% per month, 1200% per annum, and he has a problem with the tax, and he cannot collect it. He has been arrested. The amount that only got to the government would be infinitesimal. But he says he has only been there since June, and he knows nothing about the collections of his predecessors.

He says that since the trouble in Jamaica they have been no receipts.

It strikes me that it is a mistake to have any such impost between two adjoining provinces, or between any two provinces, or in any province. It is a tax upon the producer or against him.

The collector says the tax is 3% on 20.

per Cargo of 6 arrobas = 653.6 pesos

M. barca "Estella Britantia" novo in port carries 14,000 rapaduras = 56,000 arrobas = 14,377 arrobas. According to the above tax on this load it were 988.36

Some error here?

J. R. E. McAslin


Engineer Halford says that the mouth of the river Carunhanha is 2056 feet more.

1.520 = 2.94 feet more at the mouth.

236 = 2.94 feet more

13 = 9 feet deep

2.125 = 1.8 feet Velozim pessado.

735 = 200 n. curiosy

Halford made imports.

| Item           | Amount | Tax Rate | Value
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1088 te. de faz.</td>
<td>200%</td>
<td>217.60</td>
<td></td>
</tr>
<tr>
<td>80 &quot; &quot; for.euro</td>
<td>10%</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>60 bar.  &quot; Vin. eVinho</td>
<td>18%</td>
<td>1.080</td>
<td></td>
</tr>
<tr>
<td>2500 re broc. &quot; Sal</td>
<td>5%</td>
<td>125.00</td>
<td></td>
</tr>
<tr>
<td>273 Av. &quot; Jum.</td>
<td>5%</td>
<td>1.365</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>345.84</strong></td>
<td></td>
</tr>
</tbody>
</table>

Exports

| Item           | Amount | Tax Rate | Value
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>8672 Cilhoas e: 20%</td>
<td>14%</td>
<td>121.46</td>
<td></td>
</tr>
<tr>
<td>1239 Anodoses: 20%</td>
<td>36%</td>
<td>37.170</td>
<td></td>
</tr>
<tr>
<td>600 Aldeares: 20%</td>
<td>10%</td>
<td>60.000</td>
<td></td>
</tr>
<tr>
<td>122 00 Rapaduras</td>
<td>40%</td>
<td>19.560</td>
<td></td>
</tr>
<tr>
<td>3200 Alca: 30%</td>
<td>30%</td>
<td>10.240</td>
<td></td>
</tr>
<tr>
<td>507 Cist. : 30%</td>
<td>40%</td>
<td>2.028</td>
<td></td>
</tr>
<tr>
<td>920 &quot; &quot; Ferreiro</td>
<td>5%</td>
<td>4.600</td>
<td></td>
</tr>
<tr>
<td>320 Alg. : Arroz</td>
<td>2%</td>
<td>648</td>
<td></td>
</tr>
<tr>
<td>81 Mois Solas</td>
<td>20%</td>
<td>202.50</td>
<td></td>
</tr>
<tr>
<td>357 Crinos cris</td>
<td>4%</td>
<td>11.428</td>
<td></td>
</tr>
<tr>
<td>57 alg. : tabaaos</td>
<td>12%</td>
<td>684</td>
<td></td>
</tr>
<tr>
<td>125 bar. : aguas</td>
<td>4%</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>121 Alt. : godaduras</td>
<td>2%</td>
<td>309.760</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>345.84</strong></td>
<td></td>
</tr>
</tbody>
</table>

Difference 133:065:140

The rapaduras (4x6) are now worth 200 reis or more.

For the town of Carunhanha—Halford gives

265 cases 41,200 habitantes

61 lbs 66 Casas / 100 hab. habits

For Malhada—50 to 60 cases—250 habitants

Start 1.38 P.M. to go down River to the woods.
Thursday, Nov 27th

Carunhanka
L. 87-88

Yesterday, after dinner, I was to go down the river nearly a league, to where our wood was brought to the bank - and by the time we arrived, it was past evensong, and I decided that it was better to remain till morning, rather than return to the town, where we had no means of getting aboard.

So we have to lose one league of our running time - and also, this morning, water fell here.

5.45
Start near lower end of I.B.

6.30
Opp. Lower end of Carunhanka.

6.33
Opp. Lower point of Carunhanka (water in clay)

6.36
Opp. Barreto in lower part of town.

6.39
Opp. Principal landing of town.

6.41
Opp. The last house (strei) on the town.

6.45
Opp. Upper end of CARUNHANKA.

The line of demarcation between the clear water of the tributary and the muddy water of the S. Francisco is quite distinct - about 100 feet above from the shore.

The land above the town, is flat - not more than 15 feet above present water - which may be about a meter above low water.

6.54

6.58

At this point, the river is wide, and the current is flowing strongly.
Thur. Nov. 27th I. 87.

8.45 Start from MAIHAJA

8.51 I have no house on MINAS side.

8.57 Beautiful contrast - blue, yellow, water.

Now we run with Minas on Left bank, and Bahia on Right bank of River.

9.10 Instead of using I.B. I will use Minas, for I.B. till we get up to Minas on both sides.

Breakfast.

9.20 On clear river - our course rather on the Minas side.

9.35 Engineer stops boat (pessimist gave) he said for two minutes - he stopped coin slightly less.

9.37 Winding up, again.

9.40 We are on a large bar on this Bahia side. I would be better if they were there.

10.00 We are near only 1/3 mile below the middle part of the bar on Bahia side.

10.06 At 150 meters from Bahia - 2 1/4 2 2/2 3 2 4.

10.18 Opp. another midbar sand bar in the left.

10.19 40 meters from Bahia.

10.22 Channel on the Bahia side. 8-8 (30 feet)

10.29 The bar is now increasing. The bar extends obviously to the Minas side.

10.34 Opp. up pt. of I.B. (10, 44 Opp. up pt. of bar, nearly 4 feet.)
Thur. Nov. 27. - League 84.

10.32. The water has fallen 1 mile & 2 fathoms today.

10.37. Here, where the river has fallen 1 mile & 2 fathoms, the rocks are not far below the water.

10.38. We are now 8 miles from Bahia.

11.45. Land from the Machete. Much grass.

11.47. Approach to visible bar - which narrows to 400 fathoms.

11.50. Approach to Minas. 7 fathoms.

11.54. Now the bar is 5 fathoms away.

11.57. Minas bar on Bahia side. 9 fathoms.

P.S. Much water must go down the other channel on the Bahia side.

11.54. Now the bar is 7 fathoms.

12.00. Opp. Upper end of Bar on Bahia Side.

12.05. Oblique towards Bahia side.

12.15. Opp. Lower end of Island. (Unnamed on Map.)

12.19. Opp. Lower end of Island. (Unnamed on Map.)

The natural vegetation is very much along the lower part of the river.

11.30. Oblique away from Id. Anguseira.

11.35. Opp. Lower end of Island. (Unnamed on Map.)

11.35. Opp. Lower end of Island. (Unnamed on Map.)

11.42. Opp. Lower end of Bahia bar.

Opp. Upper end of said Island. Bar 600 fathoms.

11.45. Land from the Machete. Much grass.

11.47. Approach to visible bar - which narrows to 400 fathoms.

11.50. Approach to Minas. 7 fathoms.

11.54. Now the bar is 5 fathoms away.

11.57. Minas bar on Bahia side. 9 fathoms.

P.S. Much water must go down the other channel on the Bahia side.

11.54. Now the bar is 7 fathoms.

12.00. Opp. Upper end of Bar on Bahia Side.

12.05. Oblique towards Bahia side.

12.15. Opp. Lower end of Island. (Unnamed on Map.)

12.19. Opp. Lower end of Island. (Unnamed on Map.)

The natural vegetation is very much along the lower part of the river.

11.30. Oblique away from Id. Anguseira.

11.35. Opp. Lower end of Island. (Unnamed on Map.)

11.35. Opp. Lower end of Island. (Unnamed on Map.)

11.42. Opp. Lower end of Bahia bar.

Opp. Upper end of said Island. Bar 600 fathoms.

11.45. Land from the Machete. Much grass.

11.47. Approach to visible bar - which narrows to 400 fathoms.

11.50. Approach to Minas. 7 fathoms.

11.54. Now the bar is 5 fathoms away.

11.57. Minas bar on Bahia side. 9 fathoms.

P.S. Much water must go down the other channel on the Bahia side.

11.54. Now the bar is 7 fathoms.

12.00. Opp. Upper end of Bar on Bahia Side.

12.05. Oblique towards Bahia side.

12.15. Opp. Lower end of Island. (Unnamed on Map.)

12.19. Opp. Lower end of Island. (Unnamed on Map.)

The natural vegetation is very much along the lower part of the river.

11.30. Oblique away from Id. Anguseira.

11.35. Opp. Lower end of Island. (Unnamed on Map.)

11.35. Opp. Lower end of Island. (Unnamed on Map.)


11.45. Land from the Machete. Much grass.

11.47. Approach to visible bar - which narrows to 400 fathoms.

11.50. Approach to Minas. 7 fathoms.

11.54. Now the bar is 5 fathoms away.

11.57. Minas bar on Bahia side. 9 fathoms.

P.S. Much water must go down the other channel on the Bahia side.

11.54. Now the bar is 7 fathoms.

12.00. Opp. Upper end of Bar on Bahia Side.

12.05. Oblique towards Bahia side.

12.15. Opp. Lower end of Island. (Unnamed on Map.)

12.19. Opp. Lower end of Island. (Unnamed on Map.)

The natural vegetation is very much along the lower part of the river.

11.30. Oblique away from Id. Anguseira.

11.35. Opp. Lower end of Island. (Unnamed on Map.)

11.35. Opp. Lower end of Island. (Unnamed on Map.)


11.45. Land from the Machete. Much grass.

11.47. Approach to visible bar - which narrows to 400 fathoms.

11.50. Approach to Minas. 7 fathoms.

11.54. Now the bar is 5 fathoms away.

11.57. Minas bar on Bahia side. 9 fathoms.

P.S. Much water must go down the other channel on the Bahia side.

11.54. Now the bar is 7 fathoms.

12.00. Opp. Upper end of Bar on Bahia Side.

12.05. Oblique towards Bahia side.

12.15. Opp. Lower end of Island. (Unnamed on Map.)

12.19. Opp. Lower end of Island. (Unnamed on Map.)

The natural vegetation is very much along the lower part of the river.

11.30. Oblique away from Id. Anguseira.

11.35. Opp. Lower end of Island. (Unnamed on Map.)

11.35. Opp. Lower end of Island. (Unnamed on Map.)

Thur. Nov. 27. 1st da Cachoeira

12.35 We left on Bahia side 3/4. I. 83. House across all along near back.

12.43 About opp. the old (map) upper end of da Cachoeira with Santa Barbara.

This now changed into the land so that it cannot be distinguished. And there is a high-water-bar in the bay.

12.43 opp. Sanzador on Bahia side, just prairie coast along here.

Large bay on Minas side of river.
Recent water lines from 1 foot to 1 mile - show plainly.

12.50 Oblique toward mid-river.

I. 82.

12.55 opp. about upper end of cove bar Minas side. Have the mud appear clear for a mile.

1.03 opp. Sanzador - do Pão Proeto - Bahia side

1.07 opp. Point - Bahia side. Marked on map. "Mato Grosso." They are two very large trees to right, perhaps it is named from them.

1.10 A Bar begins on the Minas side of river, opp. and extends upward.


1.45 opp. Ferrugemor on Bahia side. As Melancias on Bahia side.

I. 81.

1.50 opp. Ferrugemor on Bahia side.

1.52 As Melancias on Bahia side consisting of a dense eight houses - scattered along the 1/2 and for a mile - one row, with houses.

Beautifully many foliage along river on Minas side.

1.55 Map says rocks between hts Minas and Bahia side. They are submerged and could not be noticed if there was a little break in the water. Marked "Recife" on map. These rocks are dangerous in this stage of the river and when it's lower. When tide is 2 feet higher than it is now, there is no danger.

Further if no occasion to run over there.
2.02. Opp. a good new tea plantation on Bahia side - the last house in the Province of Bahia. 200 meters below the mouth of the Rio Verde Grande.

Rio Verde appeared to be about 150 ft. wide but we did not have a very good view.

Immediately above the mouth of the Rio Verde, the land lies quite low for some distance up.

On the I.B. the large bar on the map below opposite, and above the Rio Verde is not visible; if there it is entirely submerged. I have no doubt from a few times seen that there is a bar there at low water, but probably it is smaller than it was.

This maybe "Coroa da Mangue da Cabua, I did not see the horses. Though they may be known on the map.

We are now in the Province of Minas.

Above this I will again use I.B. for left bank of the River and R.B. for the right bank.

2.20 Sand bar on R.B. River 1000 ft. 20 ft. Clay bank on I.B.

The Ilha da Severino - imbedded in sand bars, is on the R.B. side beginning somewhat above here.

2.27 I see horses, and culverts now.

2.28 - L. 80 - about

The Island Severino and its bars have been cut into a different shape by the river.

2.32. We turn abruptly to the left to run right of the head of the island and then the Channel now is.

All above the point A are now of no account, mainly sand bars or eel grass and sand.

2.39. Now opposite where the river used to run below the Island when it was about 4 m. above low water as shown on the map.

2.45. The Channel we are running in is but little over 100 meters wide. It has a high bank on the R.B. side, having cut it for about in the woods. There is some trees trash in still water 40 ft. out from the bank.

In a few years the residue of the Island Severino will probably be cast away.

2.50. The island on our right is cultivated. This may have been a part of the Severino.

2.52. The R.B. is high, nearly vertical clay slopes. Recent water level 2.5.9 meters above present water.

We run now 10 miles from R.B. only. 5 m. 4 ft. 5 1/2.

2.58. Opp. head of the island above referred to - which may have been or near the head of Severino, beyond to the right is a Channel. Here large bar extending to the I.B.

3.03. Channel now 800 ft. widening upward between the sand bar and R.B.

3.07. Opp. an odd tree and large grass area. - a mumbo.
Thur. Nov. 27. Ida de Esperanza on L.B. side say L. 79.

4.10 (Dinner, Bell 5.57) say L. 78.

4.30 apparently clear now 2000 ft. mid-day, in middle up to an island near mid-river.

4.38 Opp. lower end of bar on L.B. (Normal L.B.)

4.50 2 1/4 2 1/4 2 1/4 2 1/4 2 1/4 2 1/4 2.

4.56 Opp. lower end of island de Carvuto.

5.00 L.B. Channel 1500 ft. wide.

5.08 Opp. Upper end of said I. de Carvuto.

5.15 Upper end of R.B. [Swallen] bar of bars the other.

5.22 Upper end of L.B. in much longer.

5.22 A small bar shown by itself 200 ft. from R.B.

5.15 About I. 17. — R. 2500 ft. wide.

(A little more than 1 1/2 leagues below)

(Mango do Amador) River mouth.

5.32 Pretty cultivation on R.B. high wooded sand.

Corn looks very bright and plentiful.

Chickens very strong and healthy. Some cultivation also on L.B.

5.50 Opp. Lower end of town — White clay bank.

5.50 Opp. First high part of hill.

5.53 Opp. Raimundo Hills. Rainy to — Canoe with high.

Mansurah

5.53 Channel 2000 ft. 3 1/2.
Fri. Nov 28, Mangá de Amador, L. 77.

Province of MINAS.

5.34 After a little after Sun rise.

5.37 Opp. highest part of hill: there is sight now about 30 ft. below: it may be 5 ft. a more hillock.

5.38 Opp. a depression.

5.39 Opp. Middle of another high part 75 ft.

5.41 Opp. another depression.

5.42 Opp. Middle of the last hill. We push away.

5.44 Opp. another depression. Beyond that we see the river, the bank, about 40 ft. above low water, with a breaking top step.

5.47 Run 1500 ft. Opp. here the high bank is clean away, leaving an ordinary river, but no more to the right. From here the river is smooth.

5.50 Opp. Magnificent Cerebroma tree.

L. 76.

5.52 Cromata

6.06 River 1500 ft. wide. We are inclining off and run at a curve.

6.10 2 Miles. We are inclining back again. We are in 3° 24' 2'' (5° 30' 00'"


6.17 Opp. We turn and run at the island.

6.22 Opp. River 2500 ft. wide. We are inclining gradually round the Island.
Fri. Nov. 28.

6.34. Beautiful cultivation on R.B. side—on top of the mountain. Star found tonight. Carambola Island. Note the bar on the L.B. side at head of Carambola. It is gone; but a very heavy side bar extends out from the island towards the R.B. side along distance, leaving but little channel for that side in low water. So high water the bulk of the town may move through the R.B. side.

6.38. Opp. Submerged only 1.50 miles from R.B. We run 50 miles from it outside. The cultivation on right most R.B. side, occurs in patches along river with intermixed woods. On L.B. Cult. has been continuing to decay, numerous schools on R.B. side.

6.42. The Calcareous Mount. Morrinhos is built directly ahead. The town at the river end of the Mount which extends back nearly half a mile from the river. A few Conches in the R.B. between us and the town.

6.42. Pratá—along on the R.B. side.


6.50. Opp. Submerged only 2.00 miles from R.B. There are submerged rocks along here—although the deep channel seems close to town.


7.00. Considerable cultivation on both sides. The Church—do Morinhos.

7.10. Opp. of N.S. da Conceição, makes fine appearance from here.

7.10. Pratá goes Calcareous rocks along shore.

7.10. Pass the river along the shore.

7.10. Anchored in 3 fath. 16 miles from shore, TOWN.

Fri. Nov. 28. — Morrinhos.

We visited this place—spending an hour in examining the Church, the town and the Limeworks still behind the Church. [It is a compact hard blue stone polished in large natural masses found off in the ground in front of the Church.] The Church was built 200 years ago. It is the best, and finest archit. that we have seen in the valley.

The town is handsomely situated on a gentle sloping hill. The continuation of the limestone mountains above the highest levels. The town and Church are literally founded on a rock.

The citizens invited us on board for a few minutes, and wished us a long voyage. Many of the people, (who were in Nova de Amapari) have been from the town, an account of the sanitary war.

1 hour 16 minutes—At MIRRINHOS.

8.36. Start. Notice bowward L.B.

5.45. Opp. Pedra Calcaria on R.B. Run 600 fath.

6.50. 150 miles from L.B. running up to 300.

8.56. L.75. 150 miles from L.B.

8.56. Opp. Reed only 25 miles from R.B. The river submerged. Opp. Trend in shore below Sand bar, which projects above. We ran within 50 miles of the 1st bar in all mid river. They are 2/4 fath. above high water. These bars are dangerous when the water is about 5 fath. higher than it is at present.

Fri. Nov. 28.

9.00 - Breakfast.

good clear mor 9.00 to 9.35.

9.35 opp. a bar close n to R.B. it is on map.

This bar helps the navigation a little.

9.43 opp. upper end of said bar, as the chart R.B.
The high mountains in view yesterday morning.

Far up the river is now quite distinct a leagues

and shall or two leagues off.

We are now approaching the island, to

run to the L.B. side - the old map channel.

The R.B. side abounds with sand bars and

is very shallow. Looking at it.

9.50 Am foot of Island da Resaca.

No bar on this (L.B.) side.

Clear channel 1000 ft. wide to L.B.

9.55 L.B. zeigt. Great variety of the

tall woods on L.B. side.

9.55 opp. a beautiful tree. To趾er.

On top of hill I B. Side Deep Green.

Other high in from the green part

which I have queried the mark.

The island da Resaca has very large

trees upon it. It may have once been the Main.

10.04 opp. Resaca. A good long house, instead of

3 small, as shown.

10.05 We are on a very strong current, 15 miles per hour.

Water lilies, snow water fallen recently, ½ meters.

10.20 Rocks - only 1 foot above water - Mud Channel.

10.26 opp. head of Island (Resaca).

The bar at head is nearly

the same as on map, on the side, and is from 3 to

10.29 opp. upper part of Island bar now visible. Riv. 2500 ft.

This is the inner bar, extending laterally

from opp. head of Island, being 4 ½ m. The

entire water way to the R.B. side.

10.30 Riv. above bar 2800 to 3000 ft. wide, but

narrowing with increase.

10.47 River 500 ft. Splendid Riv. !

both shores wooded.

Fri. Nov. 28. L. 74. - 73

10.47 -

L. 72, about

10.58 opp. rocks along shore - R. B. large edge quays.

10.59 opp. a little rock - 100 miles out fr. R.B.

10.59 opp. Lower end of Large island on the

L.B. side - which can only be the Is. da

Capão. The tree appears to great on map be-

tween the head of Island Resaca and this one.

Was run in 33 minutes - and it shown ½ league on map.

11.01 White rocks at water edge on R. B.

Limestone rocks. These are shown on the

map.

We run between the Islands and R.B. in a channel 1500 ft. wide, the

old map channel is on the L.B. side - island - about 600 ft. wide.

11.10 Rocks (limestone) show at edge of water - flat.

11.15 In channel 30° from R.B.

Fine woods. No cultivation.

Beautiful variety of green shades.

11.23 opp. Submerged with 100 meters.

3 ahead still a league or more.

The same beautiful mountain.

11.26 opp. a cleaning and

Cilhão - in island.

11.26 Also opp. large lot of the

island bar at the time.

[See Dr. Anclante about distances along here]

11.32 Rocks - on R.B. side - in Rivin - in river.

11.32 opp. head of Island. Capão. Its bar

extends above; very near same as on map.

11.38 opp. upper part of said bar - which leaves one

towards L.B., where the channel is narrow.

11.39 Riv. above this island bar 2500 ft. but

narrowings and cultivation, in patches.

11.45 Riv. narrows 3. 800 ft.

11.54 opp. a jet - and a long with at L.B. these jet -

are no rocks - but this may be caused by sand

Morto marks. Rocks here.

11.54 Here are 6 Rocks on L.B. shore ( noticed)
Fri. Nov. 28.  L. 70.

Immediately above there was now 1000 ft.

Itacaramby (Cattaraugus Map)

Ruders at intervals, on shore on L.B.,

all around the Concave.

Map says: Pedro de Remanso

Deep Soundings 95 fathoms.

Remanso do Itacaramby.

11.58 Limestone rocks large and smooth. Ship along shore opposite here. Rev. 1000 ft.

12.02 Opp. up end of limestone rocks on L.B.

12.04 Opp. Sargasso, on L.B. Heavy wood just above.

(woods at higher level.

We are now passing around the head current.

12.17 Opp. a large match in the river, on R.B.

Where immediately 3000 ft.

Near there are rocks in this Cove.

A projecting point of low rock, stopped the cutting of the river, which resulted in this Cove.

Our Channel is on the Concave, L.B. Side.

12.19 Opp. up projected projecting rock - limestone.

Near it begins to oblique from L.B. and R.B., toward Mid-River.

(See a bar projecting from L.B. some up, this is not on map)

The Pilot - before I knew it, saw the lee mariners.

oblique for each, and ran between the

two branches of river mouth - 1° 17′ 13.1/4′.

12.27 Near R.B. Side - wide of when the

rocks are shown on Halford's map. We should

have gone at our normal before obliquing.

12.39 We are now in good channel on R.B.

about the rocks. Rev. 2500 ft.

called Pedro de Togo.

According to the water lines the course has

taken here is nearly 2 Miles since the

recent freshet.  Just where the rocks are

12.40 We are now within less than a league

of the Grand Mountain, on our right.

Fri. Nov. 28.  L. 69.

The Barre Mountains - to arrive Monday.

(And sketch on page 99.) We will be

somewhat ready to - League high

up the river. (Still say, about 1000 ft. high)

Pico da Serra do Itacaramby.

12.49 The water line proceeds from here 7.0 prims

much less than it is half a mile.

The river continues very wide 2500 ft.

12.55 Staff. Clay. Staff. Slope land & deep Channel P.B.

Bay in L.B. across the river now.

This bar remains the mouth, and help the depth

in the Channel on R.B. Side.

1.00 Cultivation on R.B. a few banana trees appear.

1.05 80 miles out. Rev. 1600 ft. To bar on L.B. side.

1.17 70 miles out. Here the recent freshet line shown, but unable

to get the present water. Here the

was much more fall in the river, then a strong

current, with part of bank.

There is an island on map somewhere about

here. It has this appearance.

1.21 River only above 500 ft. wide, to the bar L.B.

1.22 The oblique line to right to run the L.B. Channel

of the Island do Retiro, it appears to

have enlarged since Halford's time.

This L.B. Channel is much obstructed with land bars.

1.26 Opp. Lower end of greate point & Sand bar of

Isla do Retiro, after a very good growth of

seagrass and tall grass, among the

bathers islands. Some; but the island is not a much

accessible. Now very is cultivated. Not along a.

1.28 Channel on this L.B. Side. To 600 ft. to 700 ft.

The L.B. side is sandy clay, and of late year,

it has been cut away.

1.30 Here Channel 900 ft. L. 68.

We run over to L.B. side.

As we approach head of island - 4 1/4.

(Or at within 10 miles)

1.49 Opp. head of Isla do Retiro, which is nearly accessible

We run right for the point of the island - 1/4.

We pass thru in L.B. Side opp. head of island.

The current is now cutting, breaks island.
Fri. Nov. 28.  I. 68.

1.47 At head of present Ilha do Retiro, which is cutting across. The old sand bar at its head is gone. The Channel runs this way, but there has been a new large bar formed in L.B. side, partly submerged at present, but the streamery brings it up. Show where it is, and point it out. The head of island is from present bar.

1.58 At the R.B. side 40 mts. out (s.m.w. Rev. 2000.) about one league below Jacare.

2.05 Foring R.B. side 40 mts. out - took a small point. Here we strike away from R. B. side.

See the large bar above on R.B. as shown on map - it has now some weakly current upon it.

We are heading toward the little island on the L.B. side - called on the map, Ilha do Fortuna.

2.20 Ilha do Fortuna - then we turn up river.

2.23 Opp. lower point of said island.

Low ranges of mountains lying directly in front of us. The highest peaks nearly 1500 ft. above the river. They are very imperfectly indicated on Macartney's map, and it conveys no conception of their continuity and magnitude.

L. 67.

2.27 We strike a strong current here - Ilha de Jacare is cutting away on our side.


2.35 Upper part of island - not water may thing to day. Though it did a few days ago, when it was more higher, but it is an insignificant channel not over 10 mts. wide. The land is thin long and then may get another island channel above.

Jacare -


2.40 The river widens out here to 1800 ft. widening for a short dis., then narrowing.

2.45 Off a second point where water runs thin and makes the island. There are some small mts., not over 50 mts. wide, but they are a wider high water space, where the stream is free to run. The L.B. side is just above the little island. Channel on L.B. and it has been.

2.50 Cutting security. (2.50) Reset time 1500 ft.

2.55 100 mts. lower R.B. about half mile below Jacare.

3.05 Anchor - off JACARE.

We had been informed at Morroinhos that the invading party had rendezvous from Jacare to a place a league above, but on landing we see the town in form, then still less, and being invited to go we went onto the town, and had an interview with the Chief of the party and several other leading men in the town.

They know of our coming and of the sad news of Brazilian war. They desire to know the privilege of sending one of the leaders with 20 men up on the stream. This I declined to go on the ground that we must maintain neutrality; and are formed to maintain neutrality. Hence for a few of their men we are in board and remain half an hour, and then at our suggestion, the Chief sent us an open letter to his men about requesting them to respect our Commission, etc.

They made us a present of some beef and offered if we would remain a while to send in half an hour; but we declined on the ground that we were anxious to proceed on our way.
Fri. Nov. 28

Jacare L. 67.

After the interview with the Chief and Captains, principal men concerned in the attack upon Tanaunia we parted in a friendly spirit—promising an our Band Neutralities.

Jaquei stands on a high clay plateau on the L. B. 35° 40' S. above the mow. It has perhaps 12 hours' no very good building.

4.45 Start—running along shore to shore.

5.00 We oblique away from L. B. on account of large sand bars ahead on L. B. side. In their up-drift, they appear to fill a larger proportion of the river leading a very small open on the L. B. and the channel that we will find on the R. B.

5.10 We turn again. Suddenly we are made with her off, and then the pilot among his return too soon and the wind aged worse than before—wind working against us in full as usual.

5.55 We are in the proper channel. I was a local mistrake of the pilot, and then we use discontinuity. We take the channel between the first and 4.

6.05 In nano 300° Channel depth 5.4.

6.12 Upper end of 2°. Sand bar—4.3° 4° 2 2° 14°

6.30 Anchor in Channel on L. B. side only a little below Sobradinho.

Fri. Nov. 28

Phenomenon!!!

6.12 One of the most amazing natural phenomena.

Our immense blue segment of a circle from the bright cloud C. behind which the moon is setting over (nearby at altitude in north) can head to the horizon in the east complete and perfect. It continued 5 minutes complete and partially but 6.20 the eastern one. Their longest, fronted but much wider than it was at first.

The cloud C was regarded by bright and the rays of the sun upon its upper edge was why the sun had gold.

4 Full moon rose at 6.20—regular in the line of the phenomenon, a little north of however. The less did not encourage to the moon but to a point a little south of it.

Even anything of the phenomenon existing 6.30—(When we anchored for the night in Channel on L. B. side.)

The moon was not seen till the last part of the phenomenon had passed, and it may have had nothing to do with but the evening of the immense figured globe through the now was not visible at 6.35. It is starlight—At last man and one bright star are visible, and by the twilights and moonlight I still see to write. 6.43. Stopped writing.

There are 5 bars on the river in the distance of a mile and a half, and they divide the water into five channels at this stage of the river so that no one is very deep. From appearance I think that soon there will be a good channel down to Jacare near to the L. B.

Some turning wind about Sobradinho.
Sat. Nov. 29th

on L. B. 66 lower end.

In the midst of the numerous bars of
Sobradinho.

Sun Rise - 5:35.

5:45 Start and at once make away from L. B.
May bars hang to the R. B. side for a mile or
two, and then they are on the L. B. side. Abar
when we are now the main bar on R. B. cont
The river is about 1500 feet wide. (100 miles out)
A lovely morning.

6:00 Sobradinho - on L. B. Short up.

Reckoning about 10 miles and there is none other with
the roof. A beautiful situation
30 ft. above river. Whitewater clay banks.
Hills gently embrowned in sun.

5:57 Hear on L. B. - Near 1200 ft. to 1600 on R. B.

Time Channel along here! [Chalk 2600]

5:59 Another bar - 30 ft. back L. B.

[no people appear war!]

6:00 Opp. a handsome double trench bar on L. B.

6:05 The clay bank L. B. only 12 to 20 ft. near. Whitewater.

6:08 Opp. 4 hours and pacing on L. B. 25/43 long
A nice situation (70 miles out)
Bars ahead toward the L. B. side - first now
Showing our position. 6:10 Opp. back clay bank at the
edge of the bar.

6:13 Opp. Left end of the aforementioned large bar on
the R. B. side.
Also opp. Lower end of the bar just now
Showning above with Lothis with L. B. (800 ft)
I am glad to see that they are behind us.
Toward R. B. 4 to 5. The more i see
Straight very slightly Concave.

6:15 Opp. a bar in the bank 5 miles wide 1 mile
aboard present water. Possibly represents someth-
ing on map, but I cannot say what.

6:20 The bars and dikes are 50 different now from
the map, that is difficult to follow the
map, but in have a good 4th channel near
the L. B. side along here.

6:22 We are winding away from L. B.

6:29 Another mouth on L. B. up-stream (down
river) according to Piker & Co. des Cabarecas
24° 29' 25. 2.

We are running between two bars on
one on L. B. one on R. B. - no evidence to the
R. B. side 700 to 800 ft. - wide mouth on L. B. bar.
The R. B. bar runs out gradually to show above
3:34 1000 ft. below bar.

[Note! Mountain, behind, on L. B. side]

6:32 4:45. Submerged bar off to our right, which
helps this channel - 4° 4' 4. 4. 91 - (6° 55) 5.
6:39 5. 4. 91 (70 miles out from R. B.) (6° 42) 3 - 3. 3. 2.

6:50 Opp. - Lower (middle) bar on R. B. side. 1000 ft. above.
Another bar along R. B. shore - continues.
Opp. about where sand becomes Island.

6:55 Opp. and no. 1 bar on R. B. side. 1000 ft. off.

Another bar in sight directly ahead, falls large
Space of river. We have 2 miles R. B.
7:05 Opp. from our bar 49 19' 19' 2 27. 12. 63. Doubt.
7:09 R. B. 30 miles from shore. 3. 3. 4.

This R. B. shore is slightly concave here - low - much
Water must run in the L. B. side of Island Retiro

7:10 Land pretty thick, up, in spots, near this show.
On our right the river is well filled with sand bars
Right end of, and near island - Chan. 800 ft. from
7:13 We run within 25 miles of show - gentle Concave.

7:20 Still finer Mountain, View! Behind left.

7:21 Opp. up, end of said and near bar - visible point.
7:22 River 2000 ft. wide - good channel continues
7:30 All along on the R. B. side. 4. 4. 5 miles.
7:35 There is a bar across (1000 ft.) on the L. B. side. Water
on the L. B. side. 4. 4. 5 miles.
Sat. Nov. 29.

7.40 Opp. point on L.B. when we first meet a head of cloth on our port beam, at about 8.20 miles from the island. We are now on the port bow of L.B. when the channel curve, and the track turns to left

7.50 Opp. our course on R.B. side, sand bar apparently closing channel entirely. Opp. Pt. on L.B. When the sand is cleared, we can see the channel. Island to port and Island Retiro to L.B. side. May be little water.

7.55 Opp. Pt. on R.B. side, close to Is. Retiro. Opp. Pt. on L.B. When sand is cleared, we can see the island behind Is. Retiro. (From gun.)

8.03 Opp. L.B. side of Is. Retiro. Close 1200 ft. The bank on L.B. is clayey, laver, and it was cut away in 1857. We saw many remains of the channel here. 45° 30'.


8.22 We saw her on the scene. A principal man of the party in rest of the Wednesday at Jacare.

8.27 Opp. end of Retiro island but the large bar runs far above.

8.30 We have been running into the latitudes of L.B.

8.37 We incline to left to run below the first large bar. Meanwhile the island bar still extends up the narrow and we have to run between the two.

8.40 Opp. Upper end of Island bar

As we stage to the river a little water bar is across the channel between the L.B. and the main land bar on that side and a little more towards the sand bar and the place is known as the polder. We have the sand bar to the west of the polder, which has a wide passage. 2 miles deep at 5 miles, which is enough with the aid of the bar. 800 feet off side, with the channel to the side.

9.00 We are now on the bar at 6 miles on the side.

9.05 Opp. L.B. side, close to the island. Opp. Pt. on R.B. side, close to the island. Island Retiro to R.B. side. May be little water.


10.02 We are over at L.B. side. A little higher, sufficient for the passage. 1 mile deep at 5 miles. The island bar is 800 feet off the channel to the side of the river. It is 1 mile deep, as in run. The island bar is 800 feet.

10.05 Cultivation on R.B. side. Island Retiro to L.B. side. May be little water.


10.18 Begin to incline away towards L.B. side, to avoid an immense (granite) bar going out from R.B.
Sat. Nov. 29.

L. 63.

10.18 A Arriving at R.B. Le vine below and trace (quarry) bar that runs out from R.B. side. Whole channel at least 3/4 of the entire way wide now.

10.29 The L.B. Sand Bar is run on our right. We are obliquely between the two. 13/4 2. 24

10.30.5 Now fairly in the channel between the bar on L.B. side and the farther forming the large main (grande) bar from R.B.

10.30 When this stage it runs from 2500 to 3000

10.31 Now a short distance from width of 5000 again.

10.31.5 Now opp. sand gr. e. e. and end of L.B. bar.

10.31.5 (Recent water level here 1 1/2 meters up.)

10.35 Opp. a high wall at 600th from R.B.

10.40

L. 62.

10.40 Begin to oblign to left along main bar.

11.00 R.B. Sand Bar almost on us. We now run 700.

10.50 Now 1500 ft. and immenee (Grande) bar, R.B. and opp. L.B. Bar.

11.00 ft. Bar, L.B. 5005 ft. R.B. Wide.

11.00 ft. Bar, L.B. 5005 ft. R.B. - Wide.

11.00 ft. Bar, L.B. Narrow about 1800

11.53 A narrow little long bar along L.B. Sand opp. to

11.55 R.B. & L.B. Sand bar 1600 ft. It now widens to the L.B. Sand Bar running gradually to L.B. 3/4

12.01 Begin & oblige toward the right.

Island Armacogosa

12.05 Two miles ahead.

12.10 A Note first 3/4 mile ahead.

12.11 From the curve of the bar on R.B. side we now run on the L.B. side of the island - Water from the R.B. side.

12.14 Opp. inclined terrains now coming clay or barren in the edge on L.B. - Channel 1800 ft. to bar.


12.15 Opp. lower point of L.B. DO Armacogosa

12.20 Now we see island 3/4 mile inland. 1 mile long,

11.43 Pig Island R.B. 8000 ft. recent E. near R.B.

11.27 Opp. Riacho do Cruz Barra da Cruz

11.35 Opp. Riacho do Cruz - (Shallows here wide)

11.40 Shallow 1 1/2 1 1/2 1/2 (HARFOP) 2. 25

11.42 At low opp. end of L.B. do Armacogosa, an immenee bar projects out of the little island.

11.42 At low opp. end of L.B. do Armacogosa.

11.57 At an insignificant island, 50 feet long, 5 feet wide.

11.59 Now, however, we have a much large water open in the R.B. side. Thence which considerable water here, if of 1500 wide of start, and narrow to 50 miles 200 miles.

12.00 Now we opp. the main R.B.
Sat. Nov. 29. I. 61.

Water line of recent fresher shows 1 meter up here.

12.05 River over to Locae: L.B. Sand bar 1600 ft.

12.15 About opp. set up end of L.B. Sand bar: Re: 1600 ft.

The bars ahead on Maps: chiefly on R.B. side of river: an new item: (half-fledged) islands, pretty well filling up Med. side of river.

12.21 Opp. the lower extremity of the above.

12.25 We are pretty near to The L.B. side. Recent water line shows about 14 meters here.


12.30 Opp. a high water (or low water) outter L.B. side. Perhaps Cascado.

12.36 Recent water line 2 meters. Cattle looking the best on the clay strata. Bank 20 m. to 25 m.

I see a bar ahead on L.B. side: about 11 m.

12.41 We begin to oblique towards R.B. below the bar.

5.5. I think the channel will be good as the oblique is half-feeding island bars on our left and the L.B. bar on our right 15.5. (12.41).

12.51 3.3.3.3

I. 60.

12.56 Opp. the water outter on R.B. side: between R.B. and the half-feeding islands. Another bar. It is 100 meters wide, but it seems my little water at this stage: and little or none in extreme low water. The actual water now is only 50 meters, shallow, and slight current.

12.58 Our main channel now to L.B. bar is 800 ft. 900 ft. but widening above: we are close to R.B. Coast.

Recent W. July 12'7.

1.05 We are now oblique to R.B. between island sand bars on our right and long bars above on the left. There is some water coming down among the sand bars. The island (12'7, 100 meters on our right) on the left the bar is 1500 ft. 2' 2 1/2'.

1.09 Water line went further 1' 10' on L.B. side flat sand on L.B. side.

The water will have to be at least 3 meters higher than it is now to render it safe for small ships.

1.15 A pretty pyramidal hill, 480 feet distant from our own ship about 5'30 W.

1.18 We are now on L.B. side, The Mizarelo Sand bar 650 ft. from L.B. Coast Channel. Sandy bottom: only 10 ft. high. Cutting across broad. More sand, presumably the bar. Headpiece: quasi. Opp. a water channel - or head of an Island. I think it is the centre of a deep water channel. Even it is also the head of an island - a high-water island. A bar ahead, now projects from L.B. side. The Mizarelo and R.B. bar incline up to end along on the R.B. there.

1.28 We begin to oblique on act of bar above. The opening between the bar is 200 ft. wide; so that it may not be my deep. So little water goes down the R.B. side, however that the ships may cut a good channel. 5'5. 4'5.

1.32 We are running pretty near to the upper bar which from its almost front of the bar, bears a. 41 4 4.

1.34 Now we are leaving the L.B. bar and now the bar is leaning. As round goes over to R.B. side. 3'7 3'4 4' 4'5 in 185 ft. 2 B. about the land bar 1000 ft. 4'6'.

1.38 I pass on the island just ahead on our right: which I name the Ilha do Rodeador.

Some but not much water runs in the L.B. side.

We run to the R.B. side 5' 4'5 4'5: then mapping.

Channel from R.B. to L.B. side. 1000 to 1200 ft. above.

1.42 Opp. and round the end of (Summer) Ilha do Rodeador Bar. Bar around the Island, now an immense bar at the head runs apparently to L.B. though there must be a water cum at them.
Sat. Nov. 29, on L. 59.

2:46' Recent shoaler line 1° 40' on R.B. - 1000 ft. [Bar L] River is widening above this up to Point W.
The large sand bar from here to Point P. runs to the said Point W 3 miles ab. Island.

The 2nd St. high day now bank on R.B. has been cutting - stands in straight vertical.

Beautiful looking River above!

2:00 We oblique toward Mid River from R.B. and continue oblique toward Point P.

2:08 Opp. up & ob large bar on L.B. side below Point P. S. L.B. along line means the side of the Island. Rodeo ahead - it is a high water island.

2:10 Opp. Point on L.B. a square and point 200'

2:12 Opp. lawn and a small island on R.B. side.

2:15 Opp. Channel. Water runs down behind Island. Rodeo ahead. It's nearly close at present stage. In low water probably no water runs through - though the Channel in frond 250'.

The map confirms me above, the hypopmy of the islands and bar is so changed.

2:21 Strong current 30 meters from L.B.

2:25 Wave from BOAVISTA on R.B. Water line 4 recent present 1½' hore.

2:30 We appear to be opposite an Island. If they have been the large sand bar of Halfpenny's Time.

Say L. 58 lower end.

Great number of small gullies but up to Congregate at one particular spot, on a bank. Venue & day, have been

2:35' We see large bar heads (nor west) fore short from L.B. We oblique toward R.B. Mid bar goes out a thousand feet or more from L.B.

2:40' View.

2:44 on R.B. side - 40 meters cut. also opp. near 1000 ft. Bar. No bar which projects on L.B.

I think it must be the Island Monadeira - on our left.

2:55 We have been hanging in shallow water for some distance - in a very strong current, close to shore. We see fishing - boat on the shore.

3:06 Opp. Upper end of bar on L.B. side - and a low plain on the R.B.

3:12' 4 miles near R.B. River 2500 ft. wide - or nearly.

3:14' Began to oblique for the L.B. side.

2:13° 14° 2 14° Large bar ahead from the R.B. I think this must be the large bar, which got the upper and of Tagua do Monadeira. If remains any thing like what it was 25 years ago.

3:25' Now on L.B. within 60 meters gash 4, 4, 25'

2:27 Pedra do Alarain. on the shore L.B.

Pedra do Alarain. on the shore L.B.

# The reverse shoal line shows 2 meters here.

Bar now on our left 1000 ft. from L.B.

3:30' Opp. Furnaca (Forno) on L.B. 33° 33

3:39' Rock project (i.e.) 1 foot above water.

3:35' Opp. Lower end of Vitorianas bar in mid river.

3:53' Opp. Low end of Vitorianas bar in mid river.

Finding now more than demi below town.
Sat. Nov 29 - Januaria I, 57

Channel 1000 ft. new approaching Town
On map it is only about 300 & 350
4.00 a small land chain opening - Estevao Reaeds
4.02 opp. Reaeds da Quinta.
We asked, answer 15.52 in the back of the
river and its base.
4.24 arrived at Januaria - Port.

We went on shore, and were met
by a small old gentleman, and a little
trust of grooms. On enquiry for
the "Authorities," the gentleman told us
that they, and the troops had all gone
up the river 2½ leagues on the
opposite side to No. Senhora da
Conceição das Pedras de Maria
Da Cruz.

This gentleman was our Creweed
through the upper half the town.
Claim 800 rooms - and 800 natives.
All 800 rooms (200 & 600) and 500
At present there are not on 1000
or 1500 natives - the other than acting
before the Spanish invading army.
Some went with the authorities, some to
the woods - some to other places, in the
Tent.
The old gentleman began he was the
President of the Municipal Câmara, and
asked for a conference on the matter of,
where the authorities, which I was obliged
to Decline.
As an arm of coast to some
Ostriches already and his daughter limited
to two of the Trench, and an open half a bow
in chess and lotgins at her little meneghs
of birds and anemals. It was said that she
is the wife of the late Capitão who ordered
removing of the troops from Januaria.
We stopped at the new church near
being restored and saw the Missionary Priest
who began a good man. The Padre fled
with the authorities for reasons.
On the 26th Nov. at Caruanchana, (League 87) I had the honor to make to Your Excellency two letters giving an account of my impressions up to that place.

Between Caruanchana and Sanmaria, 31 leagues, the navigation is good, in the main Chanchana, although, needing no work to be done by the government.

We met at first some barbers of miles below her, which raised the water about two miles, in feet, about low water; but for a month 3 days it has been falling, and in places it thins from one to six and a half meters below the freshest line, so that if is no more than one meter above its low stage.

The Count has continued to advance as we have advanced. The forests are very much finer, and the cultivation at the beaches planed along the river has a remarkably healthy, thriving aspect, quite different from that along the inner part of the upper valley of Chanchana, in the larger city, in our province. On landing, we were informed that all the authorities and mayor of the people had abandoned the place, except of the apprehended officials and the attraction for the forest dwellers.

In general, most of the houses closed, and there are now a former occupants gone. It seems to be understood that the remaining family moved into and the freedom of the new life.

Concerning the merit of the subject, the action of the authorities, I have nothing to say, but to express my congratulations in such an abnormal condition, as it prevents one from getting a proper idea of the place and its situation. I am now here, for the present.

On inquiring about the mail, we were told that a mail would leave for Rio de Janeiro on the 7th December. Tomorrow I get it from here; but from the place where the Post Office has gone, with the Authentic.

We have had the good fortune to find a pilot, who has kept here, who is acquainted with the river above here, and about the first day we expect to land and go to Pedro de Marão da Cruz, which is a very good place for getting wood, which we need.

Looking after that, to reach Patinga, or the Forks of the river, if the steamer can go up. They speak about a difficult place, as "Cengicas," about 15 leagues above here; but I do not anticipate any material difficulty here, or elsewhere with the Forks. The Authentic appears given by half way between here and the Forks, to 2 1/2 miles an hour, and no nearer any point of the way. Above the Forks, Steadage, to Patinga, no bendings are given on the trip.

Having seen the Pilot on board, who is acquainted with the river above here, to act as my Company with our regular Pilot, Louis
(who we were named,
We leave Januania, bound for Pirapora.

1.33 Start in Channel 15.00 ft wide on the right of the river. Then swing off towards an Island—a little too much. Then back gradually.

1.46 150 meters. Bar on our left. Bar on our right.

1.57 Bar on our right. Bar on our left. Bar on our right.

2.05 150 meters. Bar on our left. Bar on our right.

2.08 Bar on our right. The water is shallow. Bar on our left.


2.15 150 meters. Bar on our right.

2.24 High bank. Bar on our left. Bar on our right.
Sun. Nov. 30, 1:55

0.25 App. a low place in high bank, when the
river runs down through it floods.

0.26 App. place on L.B. bar side when water
was near high. Got 4 bags and behind island
Channel from R.B. to bar 1.200 ft. [7.57 kg]
[App another track with family in many up]

2.30 We are now near another island
[4 miles] 2.17.3 near middle 21.33
[Another name on R.B. from Jamaica]

2.37 Channel 1500 ft. wide.

2.40 Opp. head of a sort of island bar, own town.

2.40 L.B. Much water open clean on that side
2.40 Bar near on R.B. Shows tides 1500 ft.
2.40 at head uni bar behind at 2.50 meter
from R.B. - near 2.00 ft. below Bar on left
above the L.B. Stone.

2.47 Bar. 1 shoe haw converged - now 1400 ft.

2.48 Bar begins to oblique 50 to R.B. shoe
on the whole the river in both again - R.B.

2.51 We are landing for L.B. shoe - cap and bar
River curves at R.B. 1.54 2.30.9

2.56 We begin oblique to left from L.B. Jamaika R.B.
Perhaps Alto Grande.

3.00 A large bar projecting from L.B. Shows 2 mile
ahead, it is no doubt in that area that an
obliquity here 2.5 to 2.20 meter. I think
the closing ship is all right.

3.03 River in 2000 ft. wide 2.20 23/4 3 past mile.
Heave to our left at 3 P.M. -
Splendida River -
[Water line 15 meter]

3.09 on L.B. Concave shore - close to shore 5.6

3.11 Opp. head end of big bar on L.B. 9 3 11 summer

3.15 Channel 1500 ft. to bar.
R.B. Side is normal - gentle concave.

3.19 Riacho do Palmeirinha - 3 miles wide.
Very gentle concave continues all the way for

Sun. Nov. 30, 1:54

3.22 Normal clay bank continues on R.B. - gentle convex
1800 ft to bar.

3.26 Normal bar begins to widen towards L.B. and
furn begins to widen.

3.27 Narrowing bar of water cape - may 30 or 30.77

Elegant navigation!

"Nossa Senhora da Conceição das Pedras de Mia Reia da Cruz" has been
[planned] in sight for some time.

3.30 [Littre futher water line hour 1/4 meter] 1800 ft.


3.38 Approaching town Close along same in 4 meter - 2000 ft.

3.41 Pretty little flowered fields. Reaping ground from
The bank

3.46 Anchor. A number of people assembled
on the church pavement - which we
afterwards learned were the authorities
and troops from Jamaica.

After dinner, we went on shore and met
the authorities of Jamaica. The Judge, the
Captain, the Mayor and the Port Master.
At a house near the beach a round
Coff which was very good.

The Judge

Was the

Chief Speaker. He talked loud, ruddy and
long, and repeated much. He explained his
position - his having been in August
ordering an arrest, and then exciting the
uncertainty of the opposing party.

The Capitão related his story of being great
number of armed men.

The radio spoke about his being para
durally vinical - and of their threat to
Cast vote here - which we thought well in a
dead-men's time, for one in his position!
Mon. Dec. 1st. — Nossa Senhora da Conceição das Pedras de Maria da Cruz.

This is a small place, of no account, with some 20 houses and a church. At present the church is a barracks for the troops.

The barrack is situated in thick brush, with deep water in front, and a pine tree on the hilly ridge above the highest point.

There is a small conglomerate rock point at the upper end of the harbor.

I heard from the Contour of the shore about here that this place is likely to continue to be as the Channel. There was a depth of 20 to 25 feet in 1863, and there is about the same now.

We made arrangements to get wood here, and we do not expect to leave this tomorrow.

Before our breakfast, the "Authority," made us a visit. I was on my cabin writing, and as no one called to see one of the visit, I went on and spent 4 hours of better during their visit, the last hour of an exact visit an hour.

Dinner at the shore. The Judge sent us some wood that a man had come from Jamainia, saying that the enemy had entered and set fire to homes and burned the Corn right on the road. And that they continued to demand farther up the river, and advising that we had better bring away all that we could. I took the liberty of not telling our story of the war, and the authorities and people no doubt believed it for

Mon. Dec. 1st. — P. de Maria da Cruz.

For long afterward I was uneasy at the thought that they had all promised. Partially, the Judge had reported a passage into the Amazon, on our way to Manaus — to see the President of the Republic and tell the White Lord to them. I declined having the steam placed in a position that would show our neutrality, and also he was informed that I had been obliged from the beginning of her voyage to decline the favors of strangers.

Now, an hour or two after this flying artillery Company had appeared, Carneiro de Melo from Jamainia and says that the other party cut off the town, about twelve of them marching, and that there was no landing anywhere, and that the people were returning. I do not yet know though I have occasion to know how many of the terrible invading party returned. St. Recca in the Chief, the one on deck in Jacui, and I imagine that he is in Martin and Mr. Simão that are one of all the "Authorities." I am taught enough to believe that they are a part of Carneiro — though I knew nothing of the merits or demerits of the parties to the Convention. I am not sure that the other party is any braver. Having been nothing on either hand that resembled bravery. I am anxious to hear about the 200 arms a man surrender of stocking Jamainia and the 14,000,000 acres of the 900,000 acres, and the resolution to spend a 100,000 if necessary. All interesting points.

This proves to be not a good place for wood.
Dec. 2nd Tuesday.

1.52.

L. 20.

Both sides.


12.26 Run 4 on the seeing's beam off the L. B.

12.28 Opp. Point on R. B. a new cleaning that.

Run 2 800 ft. side. R. 44° 44° 44°. No cleaning for upper end of bar on L. B. Shore.

12.32 Approaching L. B. Still very little wind. But we have noticed that it is much more brisk in the channel.

12.35 On L. B. side 50° from same 3 3 3 3 3 3 3 4. Run 2 800 ft. side. Water (channel) line here 1 1/2 m. ab. prem.

12.39 30° from L. B. 4 4 4. Approaching land above. An island in Halsfield's time was entirely obstructed in sand bars an immense bay. The island had 3/4 a mile below the island.

New channel is now the bar was. There is water behind the island. Now a mile wide 60 m. but a low water little water open through. The now the opening a island. Which has a large difference than from the old islands on Map.

12.50 Opp. Lower point of island. Which has a large difference from the old islands on Map. For 100 m. from end of island and.


Dec. 2nd Tues. L. 52-51

1.10 The sand from the said island runs a long way upwind of the same gradually.
1.12 Off a low place in R.B. (100 meters from shore)
1.13 Seems rather toward more nor-
1.14 R.B. shore has been cut up a little. The sand
1.15 Bank is now 50 meters above the river.
1.16 Channel here 1500 ft. [A beautiful looking
1.17 now ahead.]

1.19 Pilot says there are some rocks in here to
1.20 our left 400 meters from R.B. which
1.21 Cartwright here at the time, back.
1.22 Channel 1600 ft. to L.B. (certain bar) bar

1.27 River 1500 ft to sand bar. We are on
1.28 a 2000 m. on
1.29 7500 m. on
1.30 2000 m. on
1.31 2200 m. on
1.32
1.33 (The now is very wide and long)
1.34 (The now is very wide and long)
1.35
1.36 River 2600 ft. wide.
1.37 New opp. low place, where previously
1.38 10 m. out from it to 600 meter deep
1.39 The river is now cutting this sand 1 m. away.
1.40 (Now is very wide and long)
1.41 This is the extreme upper end of the large
1.42 island. We have been going
1.43 Channel 1600 ft. to L.B. (certain bar)

1.50 - Some spindly
1.51
1.52 At Point 15 m. Channel close to it.
1.53 River 2500 ft. wide.
1.54 New River obstructed to some extent below

Tues. Dec. 2nd

1.58 An immense bar cutting out from L.B.
1.59 On this course - in have an bow 2 ft. -
1.60 Generally 2 ft. - 2 ft.
1.61 We run about 800 ft.
1.62 Leg of bar. Probably a little too far down;
1.63 But if we do. The Pilot makes ready
1.64 a bee line by -
1.65 200 m. out from R.B. 3 m. 3 ft. 4.3 m.
1.66 Channel between R.B. and bar 1600 ft.

2.02 Closes 1500 ft. on L.B.
2.05 It is not hard to limbo R.B. up an 1500 m.
2.06 Low 1500 m. on the shore and bar. 1 ft.
2.17 At a little less red near and parallel to
2.18 R.B. It does not harm. It helps. We
2.19 Head the wide area - in an 80 meter from
2.20 10 meter depth. Channel here 1500 ft.
2.21 The Channel is along where in an
2.22 100 m. out in 10 m. depth.
2.23 We 2 mile cannot pass here.

2.27 The bar is according toward the L.B.
2.28 And the river is rapidly widening.
2.29 Still 10 m. shaving. On the clay bank.
2.25 The recent fresher line is here not over
2.27 Our R.B., 2000 ft. to the 1500 ft.
2.22 150 m. above and 150 m. current - R.B. 2500 ft.
2.23 We are heading a little for mid near 5.5 - 10
2.24 - 5.24 - 5.24
2.25
2.26 Opp. upper end of sand bar on L.B. 3 m.
2.27 200 m. out from R.B. 3 m. 150 m. widening
2.28 toward mid near.
2.27 I see large bar coming
2.29 Now making out from R.B. to do - Pilot
2.30 Obliquing 2.25 - 2.25 - 2.25 | Some water goes
2.31 River - 1/2 mile wide. above L.B. 3
2.32 In the oblique 2.25 - 2.25 - 2.25 - 2.25
2.33 L.B. 3
2.50 About here -
2.34 We are actually passing on acre & Central bar here.
Tues. Dec. 2d

2.39 Opp seen heading past a bar inside, 500 meters away from L.B. Bar then veered rapidly toward R.B. - 3 3/4 miles out.

2.41 400 miles from R.B. Very deep, sandwash which cut some time ago. Shore in cut now into a small cove. It was about straight then.

2.45 Run rapidly widening as bar accedes. But good channel along L.B. shore. Very still current - 2 miles in hour.

2.50 Opp. up and to the right. Central bar (prominence) toward R.B. shore.

Run about 2600 ft. wide.

2.51 Opp. where sandy banks seem to cut at this time on L.B.

[The current was now 0.80 m. above normal.]

2.52 Requi de Piquina toward R.B.

The bar is prominent on the L.B. side above here below the Point - 2 miles ahead.

We get in cooking 3 3/4 - 4 3/4 - 4 3/4 - 2 4/7 - 4 4/7 (Point - 2800 ft.)

Run banks are comparatively low on both sides.

3.00 In mid river - 1400 ft. each side on R.B.

3.02 Opp. Pedras d'Aireia - Sanamar Rock - Run 2600 ft. - "Meio"

3.05 Opp. Good Haul Tappo - Bebedor

With a very beautiful bar in front.

No bar apparent in sight ahead, but a long green field, in mid river, 3/4 mile ahead.

3.08 The trees falling on R.B. Opp. have 3/4 mile down the river.

3.10 Opp. a tiny rock near R.B. shore 150° mds when in river. - It does not change as Cobagai.

3.13 Opp. another House - Supposed "Capivara". Trees nearby.

Run fast. Current rr 0.85 m. at R.B. Run 2600 ft. wide.

3.18 Limp of rock (or large clay) on R.B. shore.

Tues. Dec. 2d

1.70 miles out from R.B. - Turn 2600 ft. wide.

3.21 New channel, giving evidence of the bar at the L.B. side. That is submerged.

3.24 Opp. a little farm on R.B. Water lilies & plants.

I think this is a rock molecule 6 ft.

Bar not very opp. on L.B. and also a short cliff above in mid river - 4 mile wide.

Shallow along in mid river from tiny green hills up to middle bar.

3.32 Opp. a house & cultivation on L.B. Strong current in a 2 1/4 miles in hour. Current here -

3.34 Opp. Low end of little mid river bar -

Water on the L.B. side.

3.36 Opp. Creek rock on R.B. shore partly imbedded in gravel! Gravel is a rare sight -

We have been three miles in many miles!

Here is a gravel and black rock bar of beach for 800 miles along same. The run has an uneven look.

Channel to the bar 1400 ft. - High clay bank.

3.41 The bar is now running toward L.B. side and widening the river - E. side. Channel - Freshen line 0.85 m. in.

3.43 More river rocks coming with all debris, R.B.

3.48 Opp. Cut up into end of valley, L.B. Bar - Run 2700 ft. wide.

3.50 Fini corn cult on R.B. High bank.

3.55 Rio Mangahy - on R.B.

Some bars a mile above on R.B. shore.

Rio Pandeiros - L.B.

Called "Riacho" - 10 miles wide -

Other Mapa, Pandeiros is the larger.

L. 49.
River, half mile wide. Say 2,500 ft.
Running Near L.B. Shoe - when channel is.

4.39 We are oblique toward R.B.

Near R.B. Opp. House: Support corner end of Cape - which had 2 houses in 1852. 80 meters from Shoe - 5° 5°.

4.49 Opp., another house.

4.5 In P.D. where the bank immediately bends to left. Oblique, widening the most.

4.52 Opp. Corner end a wide sand bar on L.B. We now oblique toward Mud River.

4.53 Channel here from R.B. 5° 1400 ft. bar.

We are ahead of R.B. Now we have a bar for R.B. for 1/2 league ahead.

5.03 Opp. Concave (left) River 3000 ft. wide.

5.05 Oblique to R.B. Shoe. New 2000 ft. bar on the right.

5.08 We are oblique - 3° 3° 4° 4° - River 2600 ft.

Beautiful River ahead. Lake-like.

5.15 Near L.B. near a Point. River 2600 ft.

Water not as fine above, very much.

Sharpen shoe.

5.2 The widest place here 3300 ft. Clean water. Very gradually narrowing above.

Channel in L.B. 3° 5°.

Splendid Navigation!

5.27 On L.B. Shoe - 30 miles. Freshet line 0° 60° left.

River 3000 ft. wide.

5.28 We incline gently away from L.B.

Looking back and far and it is like a handsome cake! Chocolate color again.

5.38 Opp. Point on L.B. Obliquely to R.B.

5.40 On R.B. 20 m. From Shoe - 5° 7°.

Freshet line 1 mite.

5.44 River 2800 ft. wide. As we approach Point on R.B. side.

5.45 Just before reaching Point, Bight suddenly to Rt. Fluit very wide - 2800 ft.

Look like a lake still, ahead near.

In a league up the lake-like, beautiful streams farther than we will know this evening.

On L.B. 100 meters out.

We will stop this evening and night at or near ABEIRA do RIO,
Convex on the beautiful, Concave on L.B.

It is also Concave on R.B. opposite.

On map there are some inimportant bars in the Concave on R.B. below the Rancho da Pascaia - but they are not now visible.

6.02 30 miles from L.B. River 2800 ft. wide.

6.05 30 miles from L.B. River 3000 ft. wide.

6.07 Opp. House (shaded) L.B. Freshet line 0° 70°

River 3000 ft. wide. I. 46 1/2

6.10 Anchor below ABEIRA do RIO.

REPORT

Splendid Navigation - and first class piloting - from L.54. Night night.
Wed. Dec. 3. L. 46½
near (below) Abeira do Rio.

6.55 Start - At a rainy night.
Water 102°F 0.16 = 0.32 feet (6")
At once we begin to oblique our to R.B.
Which is the reason we did not anchor higher.
We oblique a few scattered houses

7.00 4:4:4 - On the oblique 4, 4, 4, 4
River 3000' wide.

7.04About 4:4. The bank of the river, Havana (Abeira do Rio),
Orada Beningia, an oblique

7.07 Opp. Ramon de Rasca - on R.B. 2 hours.
The soundings all the way, aver 4:4, 4:4.

7.10 Within 150' of R.B. running ab.
7.13 Opp. Two small houses, on L.B. (Abeira do Rio)
Above these little settlements
Which have not grown necessarily, woods
On both sides of the river.

7.15 River 2500' wide, on is 150' on fr. R.B.


7.22 Opp. and approaching closer and of a muck offshore isle
Close on L.B. As may be seen a few houses.
7.25 River again widens to 2500'.

7.27 The Map says - Piedra Calcarcar on L.B. Opp. Pier.
A bar shows along the L.B. There but most of it
An shown in map. 1 submerged. Shores show it.

7.34 Map shows Rio. de Peixe, on L.B. Hidden by
in 150' from R.B. rivers. Riv 2200' St. (Navaly)
Recent furthest Lmt. 0.80 m. ab. present none here.

7.40 L. 46. About.

7.46 Opp. Minor Point on R.B. (ab. Unio, the R.B.
had been cut by the wind with a current to
Marking the way in the wide 3000' riv.
We oblique before we reach the minor point.

7.59 Opp. lower point of Semi island (name)
With water 170' miles wide to L.B.
With chain up it is about 150' miles in.
There is a considerable volume of water
Flooding through it at this time.

8.08 Opp. "Barra dos Patos" on R.B.
The 2nd bar is below the mouth on the
Map it is above it.

8.11 Obliqueing toward R.B. 2 bars ab. on L.B. a
Semi-island side. At present it is on
Island, three miles, ground behind it
Map shows that at low water it
Then was no water flooding behind it.
At the upper end the island and the
Sand bar merged, and had no water.

8.16 Obliqueing nearly on R.B. Riv 2000' St.
Near 4:4, 4:4

8.19 on R.B.800' miles out - Riv 2500' wide, 4:4

8.22 I see a slumpy, sand bar island, with a mid-shore
Ahead - and Pilot then toward St. Run my wide
I think he is going to L.B. wide out.
This runs not in the map, or rather the large
Bar of the map has shifted, and the channel
Now to the island.

Opp. - L.B. 2 bars, both mid-shore.
Island is cutting - when the current shifts it
You are on L.B. 450' miles out in 2:2:2, Current
Easy and
Island is my 2nd bar, with some lean 1/2:2 high.
Furthest Lmt. 0.5:4.3. Riv has cut.
It was 2000' new - 2200' opp Point.

8.39 Opp. up, end of the (visible) mid-shore bar 2000' from
L.B. 1500' fr. R.B.
But there is another bar, separa, ab. within 1000' fr. R.B.
We are obtaining 6:4:4.

8.41 Opp. Ups end of the island - Considerable volume
Of wide now is flooding in 150' miles wide Riv.
The large bar of the map, of our bar has
Flown - with bar taken the place.

8.52 Obizcuny fr. mid-nv. Fr. L.B. Whinne channel.
8.55 Run 3,000 ft. Wide. 8.59 Breakfast Bell.
9.00 Strong current - sandy banks, cutting. Pri-
Island 1/3 mile ahead - water a L.B. wid.
9.07 Opp. Coast pt. on Island on L.B. side
Pilot calls it Ilha da Engenh6 - map
que "Tapera"
9.29 Freshet line 0.60" - Run 2,000 ft. Bar
on L.B. side - or Island side.
[At length of map it says: I could not see
whether the water beyond was flowing or not.

On the map is a tongue of water between the Island and the L.B.,
but I am not sure that any river flows through at this stage of the River.
1.43
Island of Rio Pardo on our left. The Channel is now wider,
L.B. side of the river - 1,500 ft. wide.
9.58 or L.B. 300 meters at 4", 6", 4" woods in shore.
10.05 Opp. Lower pt. of new green Island 1,500 ft.
The remainder of island Rio do Pardo to abord.

Wed. Dec. 3. Wide River. 17

10.12 Freshet line - 0.50" Run 3,000 ft. wide.
10.15 Upper end of new green Island - 1,000 ft. R.B.
we run 40 meters fr. L.B. (1/3 mile long)
10.27 Map says "Pedra Calacara" on L.B. and
Barrera das Pedras on L.B.
10.32 Opp. Pt. of large sand bar on R.B. with
water behind it. We run 3,000 ft.
10.34 Opp. Up. end of large sand bar in R.B. with
Run 3,000 ft. wide.
10.39 Opp. Lower pt. of Island. (250 ft.)
from pt. of island on L.B. side across River
Shallow on outside of Island.
10.50 Say 2,000 ft. - Narrowest part to Island -
on R.B. side nearshore. 
10.52 Begin Abigue from R.B. to Pt.
A line in the water on R.B. 13. shows that the
present river is considerably above its ordinary
stage. Freshet line 0.50".

Ilha dos Angicos Island Map gives R.B.
do Born Jesus Jacob. I either this Island
is very much larger than the map of the
Upper end of "Costa" to sight - until to.
Wed. Dec 3. - on 1. 42. = 414. 59

12.09 Freshest line 0.30m. 1500 feet to sand-bar. Now the sand bar evidence off 4 Pt. to man 2 L.B.

12.15 Distant Mountain appears westward.

12.16 Opp. "Point" of land on R.B. (seen on map)

The bar and islands and channels have to changed that I am at a loss to connect the map and the river.

[Though December]

We are obliquing now away from R.B. - 5 Pt.

The upper end of the L.B. sand bar runs into a sort of vacant and then merges into main land. R.N. 2600 to 2800 feet.

12.22 70 metres out from said L.B. Varsante, cutting across a concave.

12.25 May be considered as up. end of said Varsante.

12.28 We are now obliquing toward R.B.

12.33 There appears to be nothing along here but woods on both sides, and a faint river, nearly a mile wide, between. 41.4.

We are approaching S. Jose das Pedras dos Angicos. on R.B. or left bank of river.

1.32 The river on nearing the town became to about 2000 ft. Opp. a point of.

1.35 Opp. town Pt. of Gal. on L.B. side.

1.39 1000 metres from R.B. 455 metres.

1.42 Rocks, water coves, & lower vicinity of Suburbs.

1.47 On the midst of a tempest rain above.
Wed. Dec. 3.  

Angicos

1.50 - off Limestone bluff - 25 ft. high - or more. Splendid rock front - thousands of people crowded

1.52 - off the 4th and Church Road! - Rock hill!

1.54 - Anchored 5 fathoms on the land

Angicos. In the midst of the storm - terrible - hundreds of people crowded and running - a real enthusiastic meeting.

378 hours 3 church - 4 cemetery.

We went to town, called on the new judge who has been here only 3 days - and at the same time when I came - with us, but fortunately and not fear.

Called at the P.O. to learn the day after tomorrow. Mail letter to Geo. Barnard. T.L.R. and M.L.R. Adams & Leslie are well.

Sent our letter & Capt. J. E. the curlew letter of P. & added to be mailed tomorrow.

From has more white washed houses than any in town, and of free persons.

Pop. 2500. It may be that in years he has 95 houses - 1500 about. It has grown.

At present there are 300 or so refugees here from Jamaica - (The Judge deposed 500)

In front of Church - 40 above low water.

River

Made arrangements to go wood here.

Rain at night - now raining.
Thur. Dec. 4, S. Francisco

Engaged writing one day chiefly to Mrs. L. one a postscript to Mr. P. Letter also a little note to Mr. J. and met Addie.

I arrived Misch through the day and our wood burning goes slowly, but by evening and this day in an increased a good fire. — a gentleman, a lady and her two girls from Januana called her the Slaven. All nice and the nicest looking family I have seen, the same.

At 3.78 P.M. came.

Some one gentleman called.

Tracing my long and my hand, the night of the 4th.

Halifax shows 7½ miles in front of Rocks, 47.67.

Fri. Dec. 5, S. Francisco

We made 54 miles in 15 hours last night.

Cloudy — very little rain. To day.

Wood comes in on a musical, one of the only one I have seen in this part of valley. It burns nearly as quick. I compute ten bales at 7x. = 126, 604 a cord of 128 c. b.

Our little steamer is a tender wood eater compared with the Old River, and runs 130 miles an hour.

It looks like more rain to night.

It did rain Friday night. 1/10.

Our own men made nearly 2000 shillings here.

We have now on board 4,000 shillings of wood, having obtained about 3,400, at a cost of 4 ½ each, 25% = 58,900 in all.
Sat. Dec. 6th. Cidade São Francisco,

River 2000 ft. wide.

River rises in 39 hours, 1 m. = 3.36 fath.

At the rate of 0.088% per hour, or a little

over 1 mile per hour. It is still rising.

Cloudy, cool.

9.06 Start, fairly. Hundreds of people along

the banks to see us off.

For the present (provisionary) we may

consider the water 2 1/2 meters above

low water — and rapidly rising. Kilo 9.28

Considerable cults on both sides nice.

9.56 Opp. Col. de Mucambá, on R.B.

We are now just leaving S. Francisco, we are 200 meters out from L.B. (Rio. 28 o'clock)

above the river narrow from

10.15 Opp. Caracurina, which is now overgrown

and invisible. We obtendy across the river

below it to the R.B. [Pedra (Quareira)]

through the map above Channel in L.B.;

and a Coroa, do Bom Jardim, on R.B.

10.20 We are running on where the bar is marked, half

way down. Kilo 10 meters on the bar 10 meters. Channel here

Bom Jardim — a few scabs a hundred L.B.

10.30 Opp. Coro do Frade, on L.B. Cult. ad. int.

The river along here now has the full width of the major in including the (Coro) bar.

11.00 Very little mud of bank along here. The cur-

rent just here is about 2 1/2 miles an hour.

On map it shows 1.70 miles. (in low water). After

The current appears to have been no material change

in the river below, the channel is straight,

and ranging about half a mile wide.

Kilo 10 meters. As frequent humps near all along.

11.25 A mechanical curver for breast. [Coro do

Cardeiro] and a fisherboat, found, on

and a sifting bank 20 feet. [Bom Jardim R.B.

The bank onto a little

11.38 Center bar here along from 20 ft. high — on the

bow and top of steep sifting clay, low back.

River is very little muddy in places, but no where along

here has it formed, to a 15 meter thick clay

[2 meters above]

11.48 A conspicuous land mark, high, white, and hand

[2 meters above]

11.54 River half mile wide

Opp. Lower end of

[2 meters above]

Coro da Vargem, Opp. do Canto, Safe.

12.18 Current strong — 2 1/2 miles an hour. along here

We travel along a midbar, an hour, or so.

The front of the river here to day, is not less than 600 m wide.

Kilo 9.6 meters. Roads between 1440 0, in a river Sec.


12.20 We are getting almost the strong current.

12.20 Pão d'Oleo on L.B. There hide horses.

12.25 (abtr.)

Rain still begins — short only a few minutes.

12.39 Opp. Lower end of Abor. Mentioned High Clay

Bank. L.B. 450 foot — Yellow at bottom — massive con

with stratigraphic material — and thin branch of 160 m

above low water — water being now fully 10 ft.

Very little algae. The rains and the river take away, down, in 40 minutes along the river, it is topped by a shallow practically clay mud

with sand in the stratification of horizontal. At one point it is quite feroceous, near the water.

This is designated a Halford's Map in "Barreira de Honoria." The rain slowly.

On top are bushes — and my small, scattered tree.

The current along here to day is 2 miles an hour.

12.50 Opp. here there is a decided rise of score an utratic.

12.57 River narrow 1,800 m. to a short distance.

Opp. here is a submerged bar on R.B. [Bom Jardim R.B.

[2 meters above]

1.12 Opp. "Sangrado" at head of High clay bank.

1.23 about, Kilo 1.38

H 28 miles on R.B.

Río Acary — L.B.

2.57
Sat. Dec. 6th near Rio Acay, below.

RAIN

at anchor, our account of 2 guns.

After firing from 1:45, 2:00, 4:50 12.47 started.

The preceding page:

3.12 Opp. large bar on L. B. The town and a

big bar toward the Rio Acay; it is a

large channel in deep water. 

3.20 The rain has eased for the present, but it

does not look encouraging. Rain. 3 m. wide.

1 m. high bank (25%) and top cultivated R.B.

3.45 Opp. Boa Vista and Rio de la Vida Vida

500 yds, but a number of people at the

bank to see the steamer. Houses, church in back.

The large bay shown on a map is curiously

large, but it's likely none of it has become

land - covered with small trees.

We are heading toward where the bay is on

the map; I therefore think that the bay is a

care away. See an island above, which I

presume is the I. das Caraíbas, which

was embedded in the large sand bar in

Holland time.

In fact, we are running into the channel

between said island and R.B. which

down the bar is open - and that the

channel has taken its place

in the close up to the R.B. shore (where the

bar used to be) 5 m. wide. [from]

Sat. Dec. 6th

I. 37.

4.46 We began steering from 1:00.

Pass along head of island in a channel

between heads of island and a green bar

about 1 m. above, a span above 100 m. wide.

Approach to a new channel along

alignment of island, and channel

in 6 m. wide.

4.48 Pass head of island.

4.50 Pass head of green bar. Opp. to island.

We are now in main channel at L. B. Side

of green bar running up, near bar.

P.S. We could have come up on the L. B.

side of the I. das Caraíbas. The bulk of the men

to stay flanging along in that channel.

The above mentioned green bar becomes an

island, farther up, then is a hump, from which

is new island. It is a little account - plenty of grass.

4.51 New channel to L. B. away from green bar - island.

Note that the R.B. channel, the other side of the

Green bar island is now very much

tangled with sand bars, visible even at

this stage of the river at least 128 yds.

5.02 Opp. up and green bar island - but it is all bar

or little way up, here as near green bar line that

is not visible, and bar opp. on the R.B. Side.

In low water I think then would never reach.

5.07 Down one g. Island. "I. da Caraíbas",

Fidel Curso.

1300 Vida.

Channe 500 to 600 ft. wide. The R.B. is cutting.

4.27 Opp. low place in R.B. Wonderful 2 mulee

most, water above is 1 m. high. (channel 6 ft).

The island stands 25% above low water. I judge

that is has been chiefly made of low land - plants

of low land - full of lower land.

4.35 Near cultivation in R.B. - Channel 600 ft.

widening above now. W. is cutting the island

and here, looking with Sandy Vista.

4.39 Opp. here & cultivation on the island that some

carol saw and sugar cane.

5.01 armor on the beautiful, romantic "I. B.

The men are predominantly charming.

What a place for a glorious joke! Only a

little over 1000 miles from the sea.

The men are the same a little through it, teams of

carriers to hire for 100 miles. The contrast

of the colors between the two sand bars on the R.B.

and the splendid green foliage is beautiful.

5.11 Near at the head of the 2nd green bars, but

the submerge boat 14 1/2 m. small of mi. 800 m. wide.

5.13 Cultivation on L. B. on a clearing. Once woods.

5.18 River 2 mile wide.

5.27 Brunch of green island. River 2 mile wide.

5.27 After meeting away from the river.

Riv. 2 mile wide.

5.28 Running from mid-morn (10 miles) to L. B.
5.33 Opp. 1/4 n. of Ilha da Afunda - half a
mile across the river at L. B. side - much as
it is on the map.

5.35 A funda in here somewhere. Cano, salsas,
and thatched houses. Some upland corn and tall grass in large bunches. Am. through
"Cachimangola" or Cachipanga, a brand for
ORANGE TREES

Large, some of them fully of apparently ripe
oranges - a good substantial home near.
A flourishing palm tree also.
What luxuriant growth is here! The sand
forms a cutting out along here; but the orange
and palm trees are on a higher, more elevated
bank.

5.50 - Along near R. B. shore - when it cuts
when the bank is lined thickly with small
trees, bringing to the water.

5.52 Preceding gently away from R. B. but goes back?
5.52 - 2000 ft. to I. 36 - lower end
nearly mid-way of island.

6.00 River cut the sandy bank a little along here
and let some of the little trees fall. At R. B. side
a strong current over 2 miles an hour. Trees lining
a Reguioal thickets of the little trees for 1 1/2 miles
in diameter 2 1/2 ft. long.

6.09 Anchor for the night - close in to R. B. (10 miles)
1000 ft. below a little point, about sufficient
to keep the heavy drift stuff away.
Sight on the other, just here is bank cutting -外援
a fairly good place in the foreground of the


4.28 River rose last night, only 1/4 inch.
4.30 Opp. head of Ilha da Afunda.
5.00 Cloudy morning.

5.02 Slight - about opp. head of Ilha da Afunda.
5.05 Though a long bar in beds & extend to

5.10 We oblique from R. B. on a wide & M. river.

5.18 The weather Christmas last night - but the river is beautiful!

5.23 Came from mid-morn toward River Urucuia - on L. B.
5.25 No swell. We thank heard of R. B. put
by

5.45 Opp. mouth of RIO URUCUI. 150 meters wide.
5.44 Center near an island - less deep stream.
6.00 We are new 30 m. from R. B. shore - Chain here in 18 ft.

R. B. 4.40

L. 35 - Swift, smooth current. Water very chocolate.

R. B. 7.00

L. 35 - Swift, smooth current. Water very chocolate.

R. B. 7.45 - Opp. a large bar, on the L. B. shore. This is
7.45 a large bar, on the L. B. shore. This is
probably the Coroa do 13 Randao - probably.
[The Coroa da S. Antonio of W. B. - L. B. which
place in many papers in Brazil. When it is
sublime, etc.]

8.00 Opp. mouth of "Coroa." (Revised, slightly.)

8.00 Run 2200 ft.

L. 34 - Lower end about.

8.30 Run 1/2 mile wide - 8.35 opp. an iron ore coming

R. B. 8.40 Opp. lower end of large bar on L. B. shore - much shall

R. B. 8.50 By cutting across is known the current. Running distance

L. 32 Pronounced.

8.45 Opp. R. B. on R. B. (It may be S. da Vargem Azul).

8.50 The words become small, and the banks lower.

8.55 Oblique to L. B. side - (Water muddy near L. B.)

The muddy water is brought from the bank when

9.00 Run 50 meters on L. B. Strong current. The long da
Vargem Azul, I must have doubts, but anyway.

Channel in this side now.

9.06 Breakfast 8.30!

L. 33 - Plani river.

5/6

10.30 On league 32 + 0.20 league.
Sat. Dec. 6th

5.28 Running from mid-morn (5 m.) to the 12.15. You hear the R.B. shore, but we are cutting grass. Cattle to be seen further up the coast. No small boats. The salt water is taken into the

5.33 Opp. beach grove of Iuia da A. Funda - half a mile away. The River on our R.B. side - much as it is in the map.

5.35 A. Funda is here somewhere. The people and their thatched houses are seen. There's grass in large patches. The high fountain trees or C. angolica or C. caipara are found for food.

5.40 Large, some of them, full of apparently ripe oranges - a good, substantial tree near a flourishing palm tree. The jungle growth is here. The sandy

6.00 Along near R.B. shore - almost when it cuts

6.30 River cut. The sandy bank a little along here and let some of the little lives fall into the R.B. cut a good current east 2 miles an hour, cutting a Regalae thicket of the little lives for 1/3 2.5 km. long.

6.09 Anchor for the night - close in to R.B.(10 m.)

8.45 App. R. B. - may be S. da vangam Azul.

Sun. Dec. 7th on L. 36

5.30 Start -

6.05 About opp. head of Iuia da A. Funda -

6.10 We oblige from R.B. on a mile past a river.

6.23 Come from mid-morn toward River Urucuia, on L.B. no divide is seen. We cross toward R.B. and

6.44 Opp. mouth of RIO URUCUIA. 150 miles wide.

7.00 (1st.) L. 35 - Slight current, water very chocolate, small

7.45 Opp. a large bar, on the L.B. shore. This is probably the Coroa do Branco - mountain.

8.00 Opp. (mid.) upper end of Coroa a. (Rain, slightly.)

8.00 River 2280 ft. -

8.30 River 1/2 mile wide - 8.35. Opp. an iron ore mining

9.15 Opp. lower end of large bar on L.B. shore - mountain.

9.00 River 80 ft. below L.B. Strong current. The Coroa da vangam Azul must have salted itself. The channel on the R.B. side is new. 9.06, Breakfast 10.00

10.30 on league 32 + 0.20 league - Planaca river.


11.05 São Romão, mi sight 1 1/4 leagues above.

River has fallen a few inches.

11.20 Opp. What was a sand bar (on map) if now seems to be connected with the main land on L.B. R. 2000 pounds.

11.25 River gradually widens, above. Obsolescent L.B.

The Ia. de S. Romão, mi view 1 1/2

miles or say 3/4 league ahead. Dividing the river nearly equally; the wider on L.B. side mounts a few feet. The Villa is daily seen on the right on L.B. The Villa stands a little above the head of the island.

Approaching, there is my little between here and the Villa to be specially noted:

[Shore of Clasper bran: brown-yellow.]

11.35 Win 100° out on L.B. We oblique toward Mid-River and head for the island - To take the R.B. side

11.45 [River has fallen at least 6 inches.]

11.54 Opp. Lower point of Island: bay below, ipmore.

We are close to point of land near the L.B. side of the island.

The same side as when map was made, R.B. The L.B. side was choked with sand bars in 1853 and it may be the same, but they are now submerged, or they are not so still.

Island 1 1/2 miles long.

This channel is about 1000 ft. wide. The L.B. channel is wider. It looks more to the near middle.

The island has many trees large and small and some cultivation. We tacked a few inches to the left at the broad point.

Villa de São Romão, ou Villa Risonha de São Romão.

On the left bank, at 3 leagues.

We were across the river, or we approached from the opposite side of the island, by the regular channel. Though I have no doubt that at this stage of the river the city had come up on the left bank channel of the island.)

Soon after anchoring in town on shore and entered the town. It has a good unfinished Municipal Hall and...

São Romão is built of stone and brick— which has been worked 15 years; but it is only now being finished. This was built on the site of an old fort, which was burned by the French in 1815.

The houses in São Romão are mostly generally whitewashed, though some are painted. The town has an elevating charm about it.

I visited the Church, which is the largest in the area, and it is more than 100 years old. It is the oldest church in the province.

It is surrounded by the wonderful gardens of the town, which are very picturesque.

The town has a river running through it, and the gardens are laid out along the banks.

The town is known for its fine fruit, including oranges, bananas, and other tropical fruits.

I visited the town with my friend, and we enjoyed the beauty of the gardens.

I cannot describe the beauty of the town, but I can say that it is a wonderful place to visit.

The town is about one mile wide.

24 P.M.
Caraca d'Anta - Falls at Upper end  
Paracata - 5 leagues after 

[Text continues with various measurements and descriptions of geographical features, including distances and elevations.]
Nothing could more clearly or more forcibly exhibit the actual situation of Molliton in the San Francisco valley than the recent events connected with the Villa of Sananners, the largest town on the river. A dispute between some one exercising legal authority and an individual, who alleged that injustice had been done to him by the action of the official person. Stipose on the allegation is to the fact the individual has abated, proceeds to claim a face of men for the purpose of seizing and punishing the legal personage, and either by actual force of arms or by strategy, taketh thereby a certain force of arms, destroys a general alarm, and a city containing four thousand inhabitants, is destroyed by four fifths of the people, including most of the merchants and its business entirely destroyed. Not only that, but in both directions along the river is alarmed at the CONDITION of affairs, surrounded by the town and led to the woods. Then followed a fighting skirmish between the military of the Villa of Sananners and the firm force of the individual, in which five men were killed or wounded.

Finally the authorities and the troops desert the town and fly to another town ten miles up the river. While the private ten miles up the river, while the private army of the individual was quartered at one of the villages for another hour. After remaining a few days the authorities and military force was raised with a panic and hastily at the command of Israel bundle up and depart to another town still farther up the river.

In a few days after the official declaration of Sananners, the individual field and 10th person in the place.