Letter to Joseph B. Braithwaite, 26 January, 7 February 1860

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[0001]

River Zambesi 26th January 1860.

My Dear Friend

I recieved your welcome letter
of March last a few days ago, and thank you for the
enclosure of your friend from Leeds. the defects we
have unfortunately experienced in the Ma Robert or
rather the "Asthmatic" are so numerous that it
would require a treatise as long as a lawyer's
specification of any simple subject to give you
an idea of them, and they have inflicted so much toil
that a feeling of sickness comes over me when I
advert to them. the only feasible explanation of the
conduct of the contractors I can see, is that probably
the Zambesi Expedition and the Great Niger Expedition
being alike, ~~Will~~ all must either perish or be so ill
as to be unable ever to notice any defects.
"works which will last a few months will do all -
they require". "why waste time on works so soon to perish."

Steel Plate is a failure. this is no fault of the Lairds.
It is excessively hard, does not wear at all by friction,
but decomposition sets in universally on both
surfaces, and ~~hard~~ black scales, strongly magnetic,
are formed with surprising rapidity. In twelve
months our Funnel, Furnace - Deck & bottom
were made like sieves even though the plates
were well protected by Peacock's Patent paint.
this vessel was formed pretty nearly on the
plan proposed by your friend. in

length 75 ft. - coupled below. The
coupling below being a bolt which simply slipped into
into a hole in another The least wear in the

bolt or hole such as actually took place in the
first week, allowed of a pumping action
between the compartments and perpetual
wet in the cabin was the consequence.
[0002]

One would not blame any one for this either.
but the calculation of displacement was according
to Mr Macgregor Laird that she should draw 13
inches only and if loaded up to two feet she could
carry from "ten to twelve tons" of cargo. We lately
tried her, without water in the boiler or fuel, or crew
or provisions or tools, and in salt water she
drew 23 inches. She drew 19in. at Liverpool without
the house or hatches on - and with her crew
a small stock of provisions, and one days fuel
on board she draws 31 inches. The water being
then only 5 inches from the paddle shafts.

The form - an imitation of Niger canoes - is long
narrow & turned up at the ends. this to make her
turn quickly! It is followed by the negroes because
the trees will not allow greater breadth, and the
bent up end allows them [canoe] to slide up a bank instead
of giving a shock. Here canoes are often made
of crooked trees & the craft being bent like the stock
from which it is hollowed - some future contractor
may spend other people's money in Zambesi canoe
shaped vessels as if it were the best adapted for
turning round corners.! We drew more water
from Mr Laird following the "Niger canoe form"
than your friend's model would do, from so
much having been bent up, and have derived no
advantage whatever from the use of the steel plate.
You have no idea of what our wretched vessel
is from the photograph. That is not a photograph
of a vessel, but the photograph of a picture.
Whoever suspects a photograph of telling lies? No
one. You will be able to look on your photograph
in a new light I discovered before I left Liverpool.
This form of vessel is most unmanagable for
if she touches at all it is on the middle compartment
she rests and she goes round on a pivot rather
than move off, unless she has way on her
we cannnot turn but by a long circuit
[0003]

The engine was beyond doubt made for some
other purpose. Mr Laird denies this, but his own
foreman stated this to be the case. [to Mr Rae, our engineer]. The cylinder is a
low pressure one applied to a high pressure
engine This large recess shews what is stated. the

supply pipe is considerably smaller than the
feed pipe, and the valves of the pump being
of India rubber are perpetually going wrong.
When she was tried at Liverpool two

men were employed constantly working
the pump. The boiler tubes are much too
few and situated all at one side, and chiefly
below the level of the fire. The draught being
insufficient to clear them, ashes fall [back] from
the furnace, and choke the half of the tubes
after a few hours steaming - until the
steam is generated from one side the other
remains cool. the hand may be held in the
water from right hand cock while the other
will scald. the bridge made of bricks is
a continual nuisance by breaking down
and with the best wood on the river - Lignum
vitae dried, we cannot move up the river so
fast as a man can walk. A ton of this
fuel will not give 7 hours steam. We tried a
ton of ebony this week and it did not give
five hours, our speed being scarcely a mile
an hour against a three knot current. It is
heart breaking work I assure you. We spend
far more time in wood cutting than steaming
Nor can she tow. We were obliged to leave
our pinnace at Senna a few days ago because
she held her back so much. Yet we were
promised ten or rather over ten knots.
[0004]

So long as we had coals we did pretty well but no sooner
did the Pearl leave than I saw that we had been
victimized. With common wood we could not
carry food for our crew. Any canoe beats us
unless we are going down stream. No one will
ever believe the toil we have been put to in wood
cutting. the quantity consumed is enormous &
we cannot get sufficient for speed into the furnace
It was only a dogged determination not to be beaten
that carried me through. Of late we have been spending
precious time tinkering which might have been
employed in doing good service to the cause of
civilization in Africa. But all will come
out right at last. We are not alone. though
truly we deserve not His Presence he encourages
the trust that it is granted by the word. I am
with you always even unto the end of the world.

I have thus mentioned some of the defects
of our wretched punt. Unfortuntely a mail
bag was lost on the bar off Kongone lately & we
dont know whether we are to get a vessel
in lieu of that which Bedingfeld for his own
ends got me to reject. But I wrote to my

friend James Young of Glasgow to get me
another out of my own money if £2000
will do it. We want one for the Lake
region. that is the slave market and the
prospect seems fair of cutting out a large
portion of the supply from the slave ports
on the East coast by the introduction of
the gospel and lawful commerce on
Nyassa. I think the object a worthy one
to employ the money which Providence lately
put into my power. I do not touch on
that funded for my family. We want one which
will be capable of being unscrewed into pieces of
say 500 lbs each
[0005]
Steel plate will not do. We send home Mr Rae who
well knows all our wants and what would be
suitable. Mr Tod of Glasgow has been thought
of for making the vessel proposed. We require
strength - little draught of water & power equal
at least to the heavy lumbering canoes of this
river. A condensing engine of forty horse at least,
with furnaces proper for burning wood. We
think Mr Rae will be able to see that we get the
proper thing. if the Government grants the means
for one boat it will be a help for we require
to establish a communication with the Cape
It is impossible for you to concieve how
backward every thing is here. and the Portuguese are
not to be depended on. their establishments
are only small penal settlements, and as no women
are sent out the state of morals is frightful. The
worst disease universal either hereditary or acquired.
the only chance of success is away from them.
Nothing would prosper in their vicinity.
Baines our artist was left at Tette in order to
spare him exposure to malaria and he fell before
the moral atmosphere of the place - was dishonest -
- diseased &c and we were obliged to send him
away. Very likely he may turn round & blame me
though he begged to be allowed to remain without
salary before I had spoken a word about his
conduct. Bedingfeld tried all he could to incite
the Portuguese against the Expedition as soon
as he returned, and even wrote letters to the Boletim
of Mozambique to damage us - This may appear
odd to our friends at home as they have no idea
how often the same things happen even among
missionaries. Mr Moffat brought two young men
with him from England. One did nothing for four
years, and after spending a good deal of money was

sent off to Canada. the other sat down in a
[0006]
comfortable house & garden and not even the Directors
could dislodge him till lately. After all I have seen I am
convinced that were Christianity not Divine it would
be trampled out by its propagators. Among Portuguese
Baines' example will do no harm, for they are the
lowest of the low. I tried to give him the benefit of a
doubt as to his sanity but it would not do. All the
rest i.e. Dr Kirk, Mr C. Livingstone & Mr Rae with 2
English sailors do well. I do not remember whether
I mentioned that Thornton the geologist failed. An entire
want of energy set in after our arrival. I tried him
for eight months - talking seriously to him & warning
him that should his inactivity ~~prev~~ continue I must
stop his pay. Dr Kirk & Mr C. L. did the same. We could
not get him to work. In eight months he did not
accomplish 8 days geology. His salary ran on at
about £1 per day. This money is supposed to be
spent by me, so I had to cut him off. He then
went away with a half caste trader towards Zumbo,
and if he works now it is more than he would
do while with us. He belongs I believe to Bradford in Yorkshire.

we are now on our way up the river to the
Makalolo country, but must go overland from
Kebrabasa or in a whaler. We should be
better able to plan our course had our letters
not been lost. We have never been idle
and do not mean to be.
We have been trying to get the Portuguese Government
to acknowledge free trade on this river.
and but for long delay in our letters - the
negotiation might have been far advanced
I hope Lord John Russell will help in this
matter and then we must have a small
colony or missionary & mercantile settle-
ment If this our desire is granted
[0007]
it is probable we shall have no cause to lament our
long toil & detention here. My wife's letters too were
lost so I dont know how or where she is.
Our separation and the work I have been engaged in were
not contemplated but they have led to our opening a
path into the fine cotton field in the North. you will
see that the discoveries of Burton & Speke confirm
mine respecting the form of the continent and its
fertility. It is an immense field. I crave the honour
of establishing a focus of christianity in it, but
should it not be granted will submit as most
unworthy. I have written Mr Venn twice

and from yours I see something is con-
templated in Cambridge. You did not send
a copy of the lectures there because you thought others
would do it. We always believe that [to be a] great law of
nature "What everyone is likely to do no [one] does", and
get a laugh in finding each of our friends saying
some one is sure to send you so & so. I did not
expect a volume from the lectures but thought
that M^{r} Murray would issue a cheap edition.
If it does good its all right. If young men come
to this country they must lay their account
with doing every thing for themselves. they
must not expect to find influence at once
and all the countries near to the Portuguese
have been greatly depopulated. We are now
ascending this river without vegetables
and living on salt beef & pork. Slave trade has
done its work for formerly all kinds of pro-
visions could be procured at every point &
at the cheapest rate. We cannot get anything
for either love or money in a country the
fertility of which is truly astonishing
[0008]

As a finish to the subject of this vessel I give the notes
of the brothers Laird " Hamilton Square

Jan^{y} 16 /58

D^{r} Livingstone's launch will more
probably exceed the ten knots than fall
short of it when kept in proper trim.
She appears admirably adapted for what
she was proposed for, the Upper Zambesi
above "Tete" If she is heavily laden
with stores her speed will of course
be diminished as her draught of
water is increased. As they are putting
the engine together it is impossible
to alter the power - even if desirable,
which it is not.

xxxx xxxx x

(on another subject - the Niger)
D^{r} Livingstone may calculate
on one ton for every inch Depth
in the Launch, and as in the
River he may safely load her
to 2 ft from ten to twelve tons

will be available for stores and
crew. As to space the plan sent
up shews accurately the Room

x xxxxx

Macgregor Laird

4 Jan^{y} 1859

It was with feelings of
surprise & regret that
I read the extract from
D^{r} Livingstone's letter
published in the Times
last Friday & now
confirmed by yours
of Saturday.

Some of the remarks
made are calculated to
mislead the public & one
is positively untrue.

In meeting these
objections it is well
to remember that the
Launch was designed
to perform a particular
service, which was to
act as a dispatch or
expeditionary craft
carrying but few
people and little luggage
that her draught of
water was to be 12 to 14
inches and not to exceed
18 inches

After trying to prove that the failure was owing to
her being loaded up to 2 ft 6, he adds, there is
however one statement ~~which I must deny~~ about the
cylinder being an old one originally cast for a low pressure
engine, which I must deny. and curious enough I made
a pair of engines from the same pattern for a yacht
I built for the Duke of Leeds which have given the
greatest satisfaction during the whole season. It is
signed John Laird. Ours is a low pressure
cylinder notwithstanding, and "Ten to Twelve tons" of people
are not "a few" nor is a mile an hour great dispatch

David Livingstone