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By registered Air Mail.

Dr. Miss Krishnaja, A.P.
Department of Zoology,
The Institute of Science,
15, Madame Cama Road,
Bombay 400 032, INDIA

November 18, 1981

To

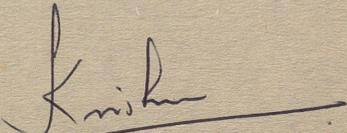
Professor K. Mellanby
Editor - Environmental Pollution
Monks wood experimental station
Abbots Ripton
Huntington, England.

Sir,

I am sending herewith in duplicate a paper titled
"Toxic effects of certain heavy metals (Hg, Cd, Pb, As and Se)
on the intertidal crab Scylla serrata along with 6 text
figures and hope this will find a place in your esteemed
journal.

Thanking you,

Yours truly,


(A. P. Krishnaja)

TOXIC EFFECTS OF CERTAIN HEAVY METALS (Hg, Cd, Pb, As and Se)
ON THE INTERTIDAL CRAB SCYLLA SERRATA

Krishnaja, A. P., Rege, M. S. and Joshi, A. G.

ABSTRACT

The toxic effects of certain heavy metals (Hg, Cd, Se, As and Pb) on Scylla serrata, the common edible Indian marine crab, are evaluated. Mercuric chloride, phenyl mercuric acetate, cadmium chloride, selenium dioxide, arsenic trioxide and lead nitrate were tested individually in laboratory static bioassays using artificial sea water to determine the 24 to 96 hr LC₅₀ values. As indicated by 96 hr LC₅₀ values PMA was found to be the most toxic and lead nitrate the least toxic. CdCl₂ showed a 6.6 fold increase in toxicity with increase in the time of exposure from 24 to 96 hours. Marked histopathological changes were noticed in the hepatopancreas and gill of Scylla serrata exposed to acute 96 hr LC₅₀ values of these metal compounds. 30 days long term exposure to sublethal concentrations of mercury and cadmium brought^{ab} out degenerative changes in the hepatopancreas and gill of exposed animals. Extensive cellular proliferation (hyperplasia) of secondary lamellae accompanied by cyst formation and necrotic regions were often seen in the gills of cadmium treated crabs. Interestingly enough, the free amino acid pool from muscle and hepatopancreas of treated animals, either after acute or long term exposure did not show any reduction in number or quantity.

Dr. Miss. Krishnaja, A.P.
Dept. of Zoology
Institute of Science
Bombay - 32, India.

21st April, 1982.

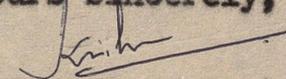
To,
Professor K. Mellanby
Editor - Environmental Pollution
Monks Wood, experimental station
Abbots Ripton
Huntington, England.

Dear Prof. Mellanby,

I had sent you a manuscript in duplicate, titled
"Toxic effects of certain heavy metals --- Scylla
serrata" on 18th November, 1981, by Regd. Air Mail.
I am sorry to say that I have so far not received
any acknowledgement. I am therefore requesting you
to let me know the position of this paper with
regard to its publication in your esteemed journal.

Thanking you and with kind regards,

Yours sincerely,


(Krishnaja A.P.)

Please send all your
correspondence to the
following address :
Dr. Miss Krishnaja, A.P.
198/5446 Vishwamohini
Pant Nagar, Ghatkopar (East)
Bombay - 400 075, India.

ENVIRONMENTAL POLLUTION

AN INTERNATIONAL JOURNAL

Edited by:

PROFESSOR KENNETH MELLANBY

Monks Wood Experimental Station

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Huntingdon, PE 17 2LS, England

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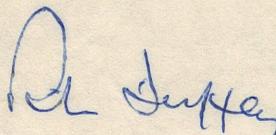
Our Ref, EP/A/

30 April 1982

Dear Dr Krishnaja,

Thank you for your letter of 21 April. I am so sorry you have not heard from us regarding your paper "Toxic effects of certain heavy metals.. Scylla serrata". We did in fact write on 25 November to inform you that we no longer normally publish papers with a marine content in this journal, and suggesting that we pass your paper to Dr G. W. Heath, Editor of our sister journal, Marine Environmental Research. I am sorry you did not receive this, and if you can let us know whether you would like us to take this action, we will ask Dr Heath if he can deal with the manuscript as soon as possible. I do not in fact think the delay will alter publication date, should the paper be accepted, as Dr Heath has a good deal of material awaiting publication.

Yours sincerely,



pp. K. Mellanby

Dr Miss Krishnaja, A.P.,
198/5446 Vishwamohini,
Pant Nagar, Ghatkopar (East),
Bombay - 400 075,
INDIA.

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Dr. Miss Krishnaja A.P.
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Bombay - 400 075
INDIA.

6 May 1982.

To,
Professor Kenneth Mellanby
Monks Wood Experimental Station
Abbots Ripton
Huntington, PE 17 2LS, England

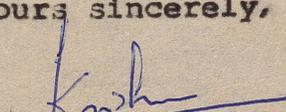
Dear Prof. Mellanby,

Thank you for your kind letter dated 30-4-1982.
I am surprised to find that your prompt letter
dated 25-11-1981 never reached me.

I greatly appreciate your suggestion of passing
my paper (Toxic effects of certain heavy metals ..
Scylla serrata)^{on} to Dr. G.W. Heath, editor of Marine
Environmental Research. I hope the result of his
evaluation will be known soon.

Thanking you once again & with kind regards,

Yours sincerely,


Krishnaja A.P.