UNIVERSITY OF NORTH BENGAL





P.O. North Bengal University, Raja Rammohunpur, Dt. Darjeeling, West Bengal, India, PIN - 734 013

From Dr. Sudip Barat Professor

TO WHOM IT MAY CONCERN

This is to certify that the work embodied in the Thesis entitled "Breeding Behaviour, Embryonic Development and Barcoding of the Ornamental Loaches (Cobitidae: Cypriniformes) of Terai Region of West Bengal, India" submitted by Ms. Arpita Dey, M.Sc., and carried out under my Supervision in the Aquaculture and Limnology Research Unit, Department of Zoology, University of North Bengal, is based on the original investigative study. Neither this Thesis nor any part of it has been submitted for any Degree or any other Academic Awards anywhere before.

Miss Arpita Dey has fulfilled the requirements of the Degree of Doctor of Philosophy in Science (Zoology) of the University of North Bengal. She has carried out the work thoroughly. In character and disposition, Ms. Dey is fit to submit the Thesis for Ph. D Degree.

Dated: 03 August, 2017

(Sudip Barat)

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CERTIFICATE

This is to certify that the thesis entitled "Breeding Behaviour, Embryonic Development and Barcoding of the Ornamental Loaches (Cobitidae: Cypriniformes) of Terai Region of West Bengal, India" submitted by Ms. Arpita Dey, M. Sc. (Zoology) for the degree of "Doctor of Philosophy (Ph. D.)" in Zoology, University of North Bengal, was under my co-supervision.

Ms. Arpita Dey, had carried out a very small part of the work at the Fishery Unit, Uttar Banga Krishi Viswavidyalaya, Pundibari, Cooch Behar. This Ph. D. thesis is based on the original investigations done by her and that neither this thesis, nor any part of it has been submitted earlier for any other Degree or Academic Awards.

Place: Cooch Behar

Date: 9th June, 2017

(Debapriya Sarkar)

Dr. (Mrs) Debapriya Sarkar Professor in Fishery Fishery Unit, UBKV Pundibari, Cooch Behar

Deleapnija sakar

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