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Journal of the Marine Biological Association of the United Kingdom
Volume 100, Issue 4, 1 June 2020, Pages 645-650

Reproductive seasonality and environmental effects in green turtle (Chelonia mydas) nesting at Penang Island, Malaysia (Article)

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Abstract

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For species with environmental sex determination, understanding the relationship between reproduction and environmental factors is important for predicting their reproductive output. Here, we study intra-annual variation in green turtle nesting during the 2010-2016 seasons at Penang Island (5°16′28″-5°28′15″N 100°10′52″-100°11′55″E), Malaysia. The additive modelling on a monthly-basis number of nests shows that fluctuation in the number of nests relates to temperature in addition to month of year, rather than precipitation. The number of nests tended to be higher in response to higher temperature during March-July, whereas the lower temperature during August-February also tended to result in a relatively higher number of nests. Concentration of nests during March-July resulted from a shorter inter-nesting interval during warm temperatures, whereas relatively low temperatures may homogenize the temporal distribution of the number of nests. This study provides fundamental information for green turtle nesting seasonality in response to environmental change. Copyright © Marine Biological Association of the United Kingdom 2020.

SciVal Topic Prominence

Topic: Caretta Caretta | Chelonia Mydas | Eretmochelys Imbricata

Prominence percentile: 97.013

Author keywords

Additive modelling | precipitation | sea turtle | seasonality | temperature

Indexed keywords

GEOBASE Subject Index: annual variation | environmental effect | environmental factor | nesting behavior | reproduction | seasonal variation | seasonality | temporal distribution | turtle

Regional Index: Malaysia | Penang | Penang Island | West Malaysia

Species Index: Chelonia mydas | Cheloniidae | Testudines

Funding details

Funding sponsor	Funding number	Acronym
International Islamic University Malaysia	-003-0003	IIUM
Universiti Sains Malaysia	6711134	

Funding text

The first author's scholarship is sponsored by MyBrain15 (MyPhD) from the Ministry of Education Malaysia and Postdoctoral Fellowship from the Universiti Sains Malaysia (2020–2021). Research was financially supported by a Postgraduate Research Grant Scheme (PGRS) from the Universiti Sains Malaysia, a grant from the Ministry of Education Malaysia (Grant no: 6711134) to S.A.M.S. The authors are also grateful to the Research Management Centre, International Islamic University Malaysia for partially funding through Post-Doctoral Fellow Research Initiative Grant Scheme (RPDF:18-003-0003).

ISSN: 00253154
CODEN: JMBAA
Source Type: Journal
Original language: English
DOI: 10.1017/S0025315420000399
Document Type: Article
Publisher: Cambridge University Press

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