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TITLE: North Atlantic intermediate water variability over the past 20,000 years

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ABSTRACT:

Research Article| May 13, 2019 North Atlantic intermediate water variability over the past 20,000 years Moriaki Yasuhara; Moriaki Yasuhara * 1School of Biological Sciences and Swire Institute of Marine Science, The University of Hong Kong, Kadoorie Biological Sciences Building, Pokfulam Road, Hong Kong SAR, China2National Museum of Natural History, Smithsonian Institution, Washington, D.C. 20013-7012, USA *E-mail: moriakiyasuhara@gmail.com; yasuhara@hku.hk Search for other works by this author on: GSW Google Scholar Peter B. deMenocal; Peter B. deMenocal 3Lamont-Doherty Earth Observatory of Columbia University, Palisades, New York 10964, USA Search for other works by this author on: GSW Google Scholar Gary S. Dwyer; Gary S. Dwyer 4Division of Earth and Ocean Sciences, Nicholas School of the Environment, Duke University, Durham, North Carolina 27708, USA Search for other works by this author on: GSW Google Scholar Thomas M. Cronin; Thomas M. Cronin 5U.S. Geological Survey, Florence Bascom Geoscience Center, 926A National Center, Reston, Virginia 20192, USA Search for other works by this author on: GSW Google Scholar Hisayo Okahashi; Hisayo Okahashi 1School of Biological Sciences and Swire Institute of Marine Science, The University of Hong Kong, Kadoorie Biological Sciences Building, Pokfulam Road, Hong Kong SAR, China2National Museum of Natural History, Smithsonian Institution, Washington, D.C. 20013-7012, USA Search for other works by this author on: GSW Google Scholar Huai-Hsuan May Huang Huai-Hsuan May Huang 1School of Biological Sciences and Swire Institute of Marine Science, The University of Hong Kong, Kadoorie Biological Sciences Building, Pokfulam Road, Hong Kong SAR, China6GeoZentrum Nordbayern, Universität Erlangen-Nürnberg, Loewenichstraße 28, D-91054 Erlangen, Germany Search for other works by this author on: GSW Google Scholar Geology (2019) 47 (7): 659?663. https://doi.org/10.1130/G46161.1 Article history received: 17 Feb 2019 rev-recd: 16 Apr 2019 accepted: 18 Apr 2019 first online: 13 May 2019 Cite View This Citation Add to Citation Manager Share Icon Share Facebook Twitter LinkedIn MailTo Tools Icon Tools Get Permissions Search Site Citation Moriaki Yasuhara, Peter B. deMenocal, Gary S. Dwyer, Thomas M. Cronin, Hisayo Okahashi, Huai-Hsuan May Huang; North Atlantic intermediate water variability over the past 20,000 years. Geology 2019;; 47 (7): 659?663. doi: https://doi.org/10.1130/G46161.1 Download citation file: Ris (Zotero) Refmanager EasyBib Bookends Mendeley Papers EndNote RefWorks BibTex toolbar search Search Dropdown Menu toolbar search search input Search input auto suggest filter your search All ContentBy SocietyGeology Search Advanced Search Abstract North Atlantic intermediate-water temperature variations based on ostracod Mg/Ca ratios from Ocean Drilling Program (ODP) Hole 1055B document a series of multi-centennial-scale abrupt warming events throughout the last deglaciation and Holocene (up to ?3 °C). These events are coherent with abrupt climate reversals including Heinrich event 1, the Younger Dryas?Intra-Allerød cold period, and Holocene North Atlantic Deep Water (NADW) reduction periods. Deglacial?Holocene warm events were likely related to reduction in the strength of the upper NADW (Labrador Sea Water). We also found a long-term cooling trend in the ODP 1055 Mg/Ca record indicating continuous Labrador Sea Water strengthening throughout the Holocene. Our results help to better understand deglacial?Holocene upper NADW dynamics that remain poorly understood but can be important for regional and global climates. You do not have access to this content, please speak to your institutional administrator if you feel you should have access.

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