

August Report: Outlook Based on July Data

Regional 2009 Outlook: Western Parry Channel Route of the Northwest Passage

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August Update:

As of July 27, a considerable amount of sea ice within the Western Parry Channel route through the Northwest Passage was still landfast (Figure 1), which was approximately 2 weeks later than observed for 2007 and 2008. This delay in breakup reduces the possibility of the route clearing in 2009. The date of melt onset for 2009 (year day 155) within the region was also later than 2008 (year day 142, the earliest on record) however, 2009 was 1-day earlier than 2007 (Figure 2) when this region cleared for the first time in the satellite era. It should be noted that early melt onset dates alone are not sufficient enough to clear this region of the Northwest Passage. For clearing in August 2009 to occur, rapid melt would soon have to take place and thereafter, atmospheric conditions must restrict the flow of multi-year ice (MYI) from the Queen Elizabeth Islands through Byam-Martin Channel into the Western Parry Channel.

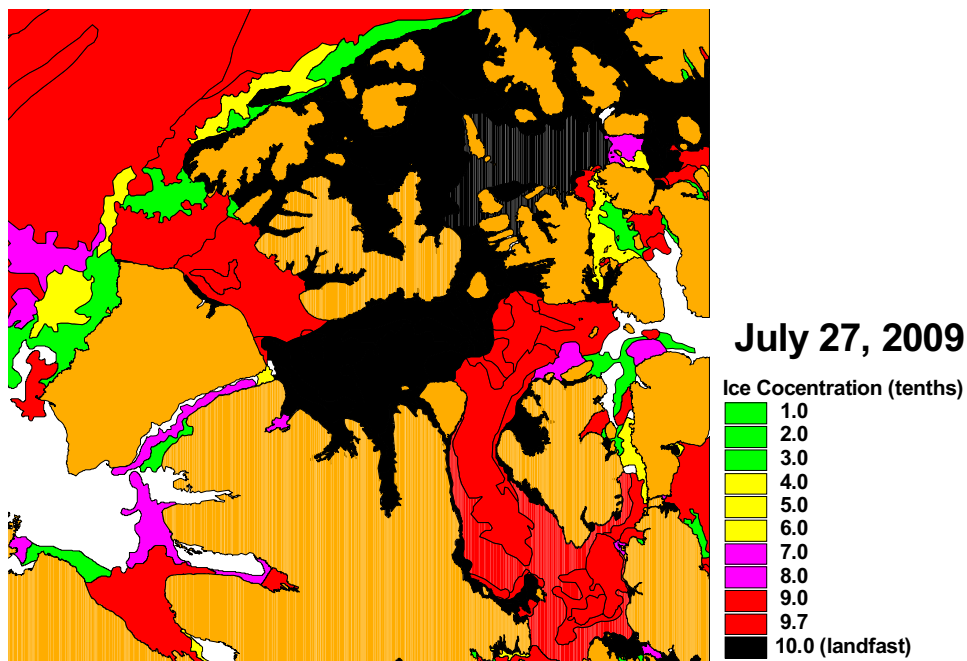


Figure 1. Sea ice concentration (tenths) in the Western Parry Channel region of the Northwest Passage on July 27, 2009. Data is from the Canadian Ice Service.

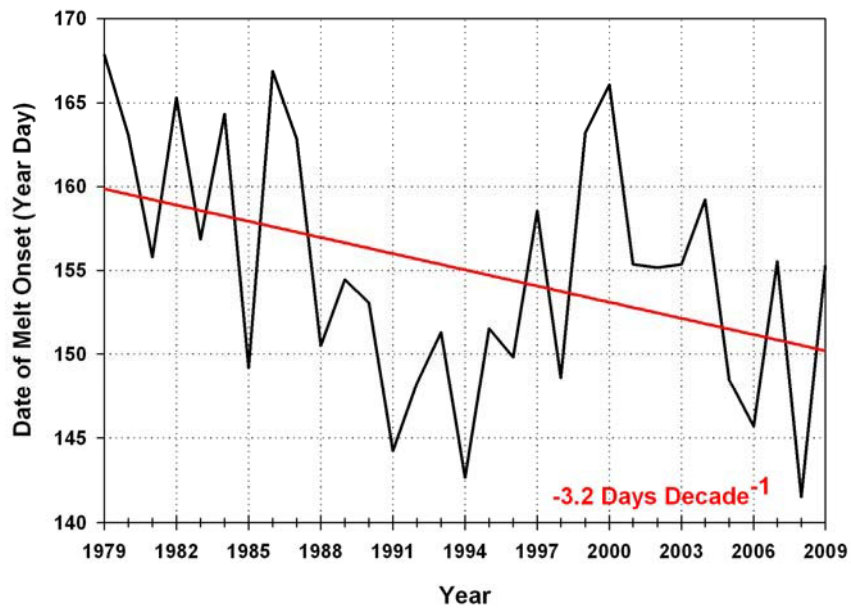


Figure 2. Date of melt onset in the Western Parry Channel region of the Northwest Passage from 1979-2009. Data are from the Defense Meteorological Satellite Program (DMSP) F-series satellite SSM/I and SSMIS sensors. Algorithm provided by Thorsten Markus, Goddard Space Flight Center.