CSAS 2020/071 Figure 25

Terms of Use

As a courtesy to fellow scientists, please e-mail Dr. Catherine Johnson (Catherine.Johnson@dfo-mpo.gc.ca) to indicate how you are using these data so that efforts are not duplicated. Comments and suggestions are also welcome.

The data provided here can be redistributed and/or modified under the terms of the Government of Canada Open Data License Agreement as published on http://open.canada.ca/en/open-government-licence-canada in its current version, or any subsequent version.

The data are licensed "as is". Fisheries and Oceans Canada makes no representation and gives no warranty whatsoever with respect to the data and expressly disclaims any implied warranty of merchantability or fitness for a particular purpose of the data. Fisheries and Oceans Canada assumes no obligation or liability whatsoever for the provision of updates to the Data. See the Government of Canada Open Data License Agreement at http://open.canada.ca/en/open-government-licence-canada for details.

Citation

It is suggested that data users cite the DFO Canadian Science Advisory Secretariat (CSAS) research documents as specified within the "Foreword" of the associated report body:

Casault, B., Johnson, C., Devred, E., Head, E., Cogswell, A., and Spry, J. 2020. Optical, Chemical, and Biological Oceanographic Conditions on the Scotian Shelf and in the Eastern Gulf of Maine during 2019. DFO Can. Sci. Advis. Sec. Res. Doc. 2020/xxx. vi + 64 p.
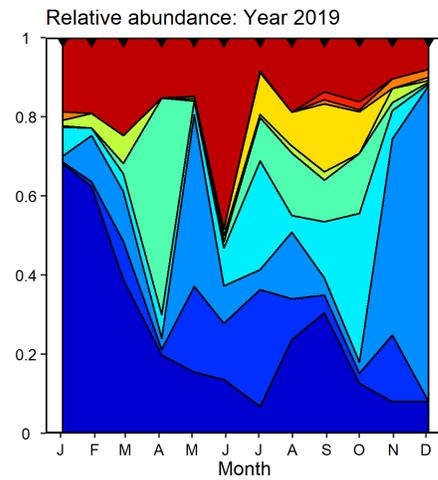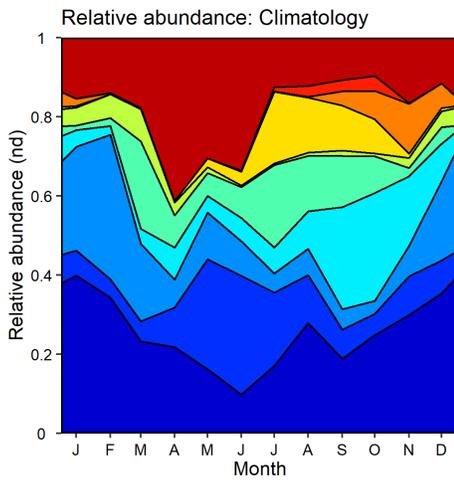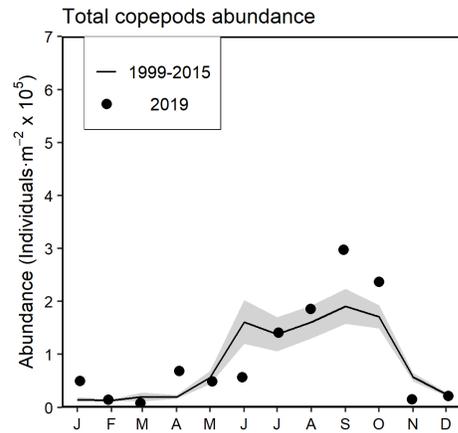
Contact

For questions concerning the data provided, please contact:

Dr. Catherine Johnson
Fisheries and Oceans Canada
Bedford Institute of Oceanography
P.O. Box 1006, 1 Challenger Dr.
Dartmouth, N.S. Canada B2Y 4A2
Tel: 902-426-0753
Email: Catherine.Johnson@dfo-mpo.gc.ca

Figure
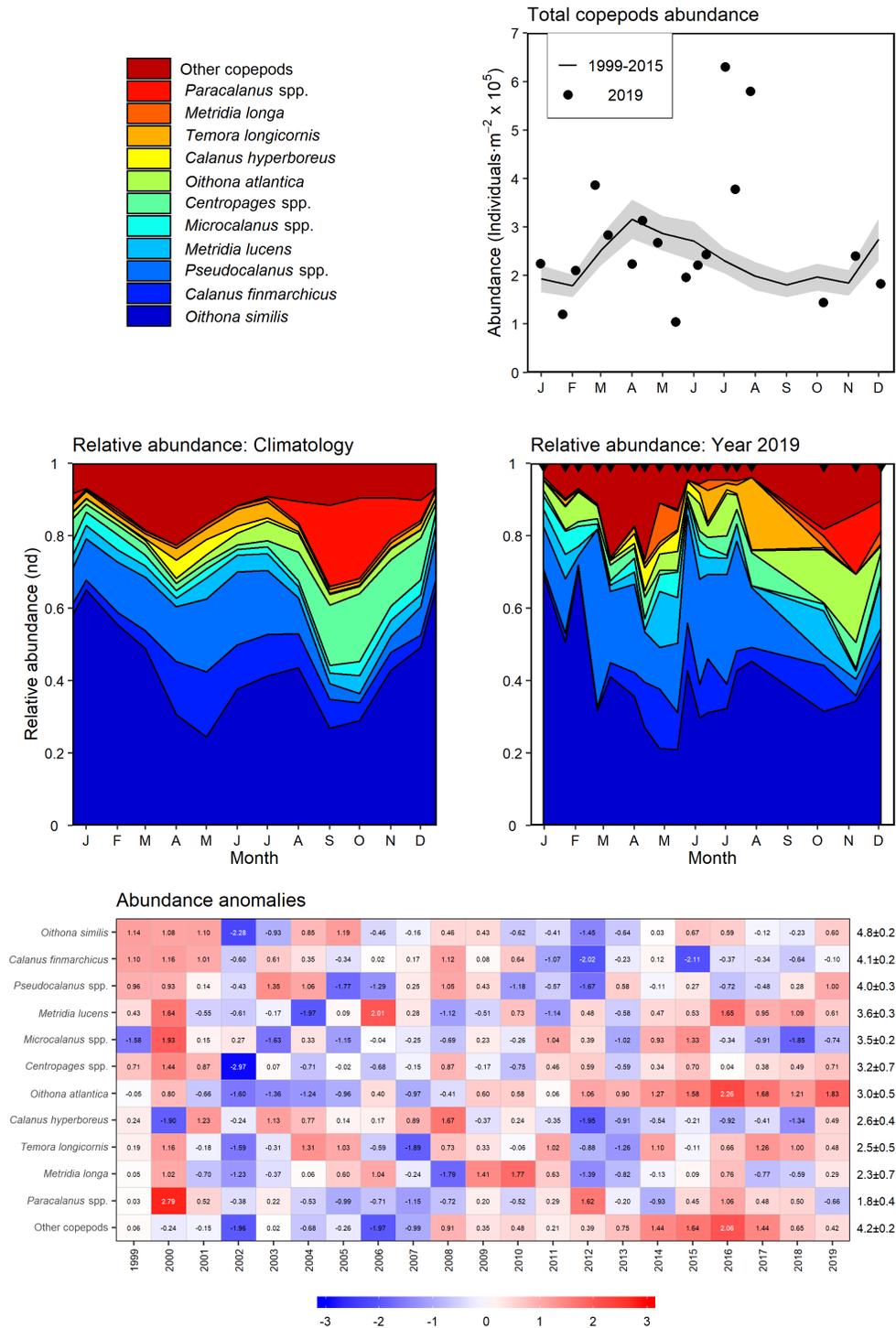
Variability of dominant copepods at Halifax-2. The top 95% copepod taxa by abundance are shown individually; unidentified copepods (mostly nauplii) are grouped as "others." Upper right panel: copepod abundance in 2019 (solid circle) and mean conditions, 1999–2015 (solid line). The gray shaded area represents the standard error of the monthly means. Middle left panel: Climatology of copepod relative abundances, 1999–2015. Middle right panel: copepod relative abundance in 2019. nd = no dimensions. Black triangles in the middle right panel indicate sampling dates. Tick marks on the horizontal axes indicate the 15th day of the month. Bottom panel: Annual anomaly scorecard for copepod abundance. Values in each cell are anomalies from the mean for the reference period, 1999-2015, in standard deviation (sd) units (mean and sd listed at right). A grey cell indicates missing data. Red (blue) cells indicate higher- (lower-) than-normal abundances.

Total copepods abundance

Relative abundance: Climatology

Relative abundance: Year 2019

Abundance anomalies

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Oithona similis	0.65	0.37	0.88	-0.64	0.10	0.28	-0.22	-0.04	-0.12	0.23	-3.59	0.10	-0.02	0.39	0.46	0.81	0.38	0.57	0.28	0.34	0.42	3.7±0.7
Pseudocalanus spp.	-1.80	0.35	2.01	-1.62	0.12	0.09	-1.29	-0.43	0.32	1.35	-0.54	0.94	0.44	0.04	0.74	-0.39	-0.34	0.23	-1.45	-4.92	-0.47	3.3±0.3
Calanus finmarchicus	-2.52	-1.43	0.25	-0.88	0.60	1.16	0.85	1.83	0.28	0.62	-0.05	0.10	0.10	-0.58	0.02	0.02	-0.37	-0.87	-0.74	-1.34	1.35	3.2±0.4
Centropages spp.	-0.70	0.99	0.42	-1.00	-1.57	-1.74	-1.41	-0.06	0.33	0.67	-0.45	0.41	-0.10	1.03	1.57	1.01	0.60	2.14	1.14	-0.52	0.87	3.1±0.4
Acartia spp.	-0.89	0.35	1.59	1.27	0.27	0.85	0.15	-1.31	0.35	-0.21	-2.20	-1.35	0.00	-0.67	0.66	0.38	0.75	1.02	1.41	-3.89	-0.06	2.9±0.4
Microcalanus spp.	-1.95	-1.33	0.01	-1.33	-1.02	-0.09	1.10	0.89	-0.23	-0.97	0.72	0.93	0.60	0.84	0.27	0.11	1.45	-1.55	-2.33	-1.21	0.22	2.3±0.5
Temora longicornis	0.19	-0.12	1.04	-1.87	-0.42	0.33	-0.35	-0.31	-1.94	-0.15	-0.46	-0.02	-0.07	0.91	-0.12	1.23	2.12	-1.13	1.27	-0.83	0.01	2.1±0.4
Paracalanus spp.	1.22	2.07	-0.36	-0.20	-0.99	-0.76	-0.37	-1.00	-1.29	-1.07	0.83	-0.59	-0.22	1.69	0.74	0.03	0.28	2.05	-0.34	0.94	0.15	1.2±0.4
Eurytemora spp.	-1.19	0.24	0.40	0.80	0.28	-1.34	-1.79	0.56	1.40	-0.44	-1.04	1.07	-1.34	1.25	0.43	0.66	0.05	1.63	1.11	0.30	-0.06	0.9±0.6
Other copepods	-0.48	-1.07	0.99	-1.88	-0.54	-0.65	-1.30	0.24	-0.63	-0.30	0.03	1.46	-0.04	1.16	0.70	1.66	0.64	0.68	0.87	-1.33	0.84	3.7±0.3

Legend:
- Other copepods
- *Eurytemora* spp.
- *Paracalanus* spp.
- *Temora longicornis*
- *Microcalanus* spp.
- *Acartia* spp.
- *Centropages* spp.
- *Calanus finmarchicus*
- *Pseudocalanus* spp.
- *Oithona similis*
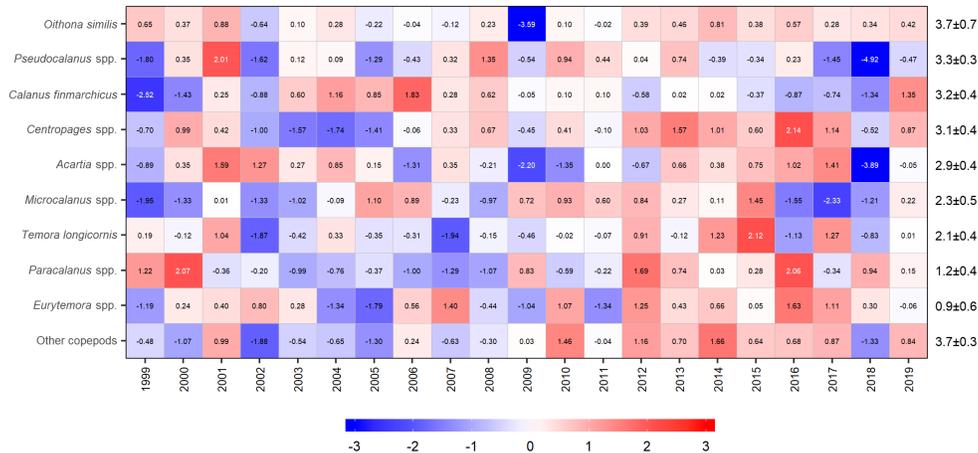
Variability of dominant copepods at Prince-5. The top 95% copepod taxa by abundance are shown individually; unidentified copepods (mostly nauplii) are grouped as "others." Upper right panel: copepod abundance in 2019 (solid circle) and mean conditions, 1999–2015 (solid line). The gray shaded area represents the standard error of the monthly means. Middle left panel: Climatology of copepod relative abundances, 1999–2015. Middle right panel: copepod relative abundance in 2019. nd = no dimensions. Black triangles in the middle right panel indicate sampling dates. Tick marks on the horizontal axes indicate the 15th day of the month. Bottom panel: Annual anomaly scorecard for copepod abundance. Values in each cell are anomalies from the mean for the reference period, 1999-2015, in standard deviation (sd) units (mean and sd listed at right). A grey cell indicates missing data. Red (blue) cells indicate higher- (lower-) than-normal abundances.

Data

Time series

The dominant copepods abundance data used to plot Figure 25 are available here for HL2 and P5 fixed stations.

Climatology

The dominant copepods abundance climatology data used to plot Figure 25 are available here for HL2 and P5 fixed stations.