

Tracking 2014-15 Sea Surface Temperature Anomalies using Coastal Data Information Program (CDIP) Nearshore Buoys



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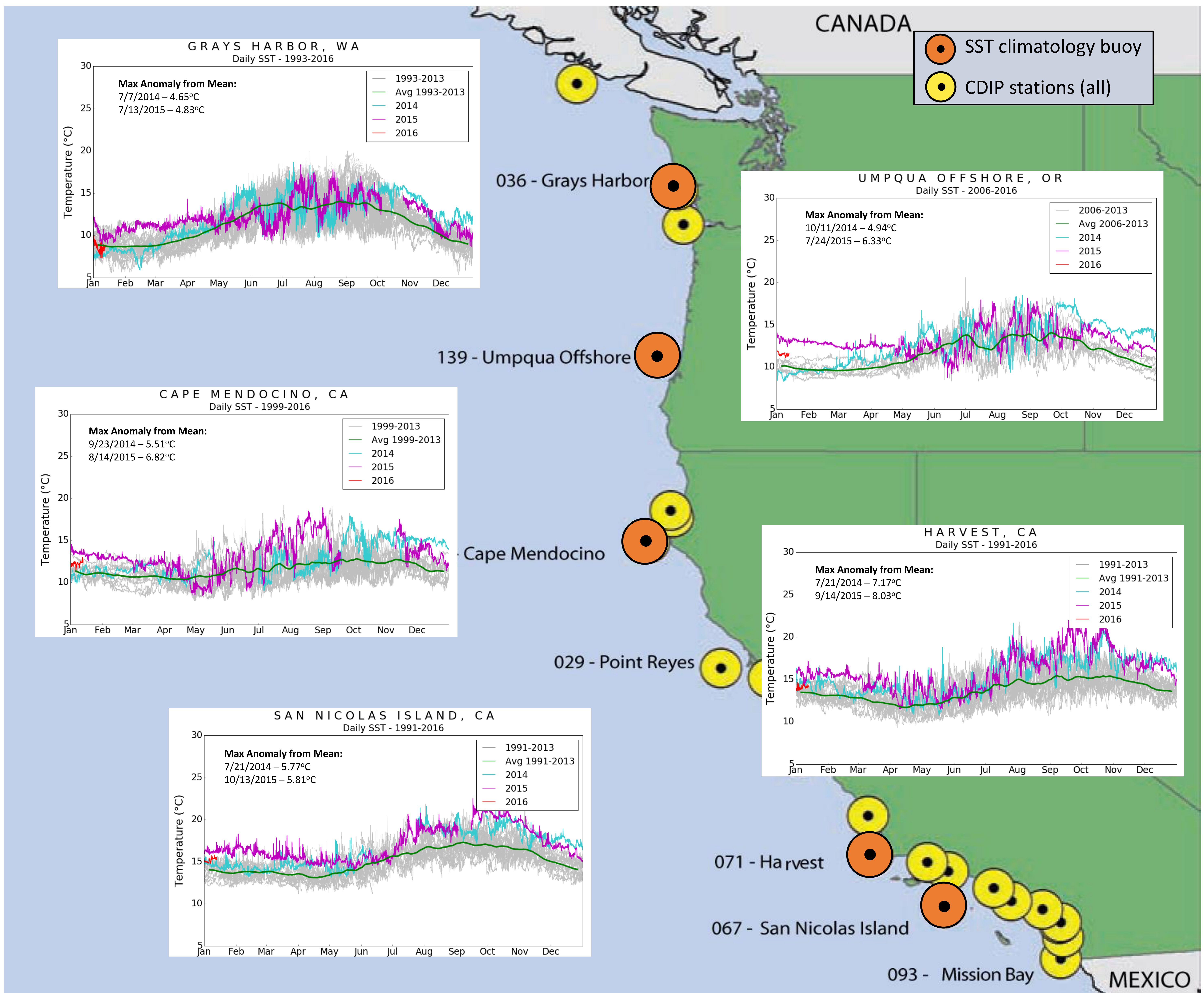
INTRODUCTION

Anomalous water temperatures developed across the California Current System (CCS) during 2014, and persisted through fall 2015. A warm-water “Blob” in the Gulf of Alaska in winter 2013-14 led to speculation that the 2014 CCS warming was due to direct southward propagation of warm waters from the Blob. However, timeseries of sea surface temperature (SST) records from nearshore Coastal Data Information Program (CDIP) buoys suggest that the onset of warm waters in the coastal CCS occurred at different times and from different sources depending on location.

SST timeseries provide valuable information about physical ocean parameters and related biological and climatological changes (unusual species sightings, coastal ocean health, atmospheric changes).

DATA SOURCE

CDIP buoys measure nearshore wave parameters and SST. Temperature sensors are located at approximately 45 cm below water surface. Buoys collect SST data every 30 minutes. Data are available through NDBC servers, the National Weather Service, and the CDIP website.



CONCLUSIONS

Our data suggest that the warm “Blob” from the Gulf of Alaska propagated south to Washington and Oregon during fall 2014. The delayed onset of anomalous SSTs off OR and WA compared to the Southern CCS suggests that warm waters were held offshore of OR and WA during spring-summer 2014 by upwelling-favorable winds. The spring 2014 onset of anomalous SSTs in the Southern-Central CCS suggests a different warm-water source, perhaps from the south.

ACKNOWLEDGEMENTS

Primary funding for CDIP buoys comes from U.S. Army Corps of Engineers and CA Dept. of Parks and Recreation

