



Chesapeake Dolphin Watch

UMCES • Chesapeake Biological Laboratory



Photo courtesy of Jeff V.



Photo courtesy of Beth H.



Photo courtesy of Sailor P.

Citizen scientists inform bottlenose dolphin research in Chesapeake Bay.

www.ChesapeakeDolphinWatch.org

Little is known about how often bottlenose dolphins come into Chesapeake Bay, how long they spend here, what areas of the Bay they are using and why. In 2017, Dr. Helen Bailey and her team at Chesapeake Biological Laboratory (CBL) developed an app which engages members of the public as citizen scientists to help answer these questions. Boaters, anglers, birders and those who enjoy being on or by the Bay can report dolphin sightings in real time. This observation network provides information on dolphin distribution and local residents are encouraged to learn about these animals and their environment through participating in this research project.

To join over 5,500 citizen scientists already reporting dolphins, set up an account using an email address at: chesapeakedolphinwatch.org or download the mobile app from iTunes or Google Play. Users can view bottlenose dolphin sightings, photos and videos from sightings, and listen to recordings of dolphin communication from our hydrophones (underwater microphones).

To report a dolphin sighting:

- click the map on the location you saw the dolphins
- enter dolphin sighting date and time, and select the group size from the slider bar
- type a short description of what you saw, where you observed the dolphins, or interesting details
- upload images (photos or video)

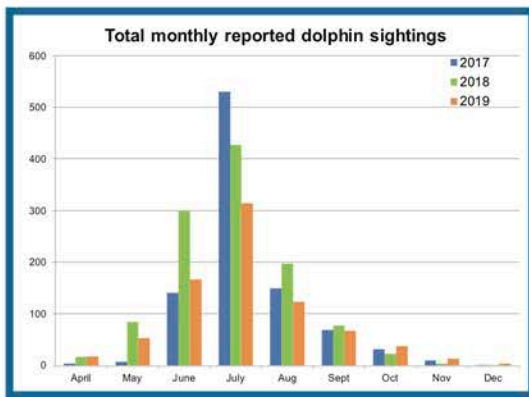
The photo (right) shows a preview of the Chesapeake DolphinWatch sighting reporting box.



Scan one of these QR codes with your smart phone to download the app from Google Play (left) or Apple app store (right).



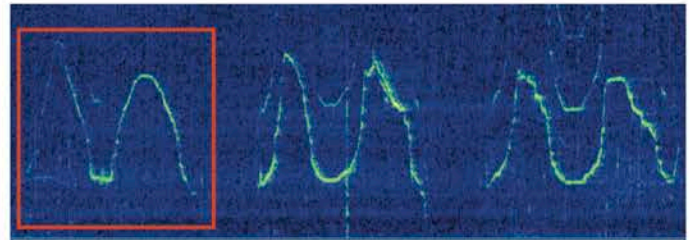
In 2017 a total of 949 dolphin sightings were reported, of which we were able to confirm 44%.



After improvements in the app in 2018 and 2019, we were able to confirm over 70% of the 1,129 and 821 dolphin sightings reported, respectively.

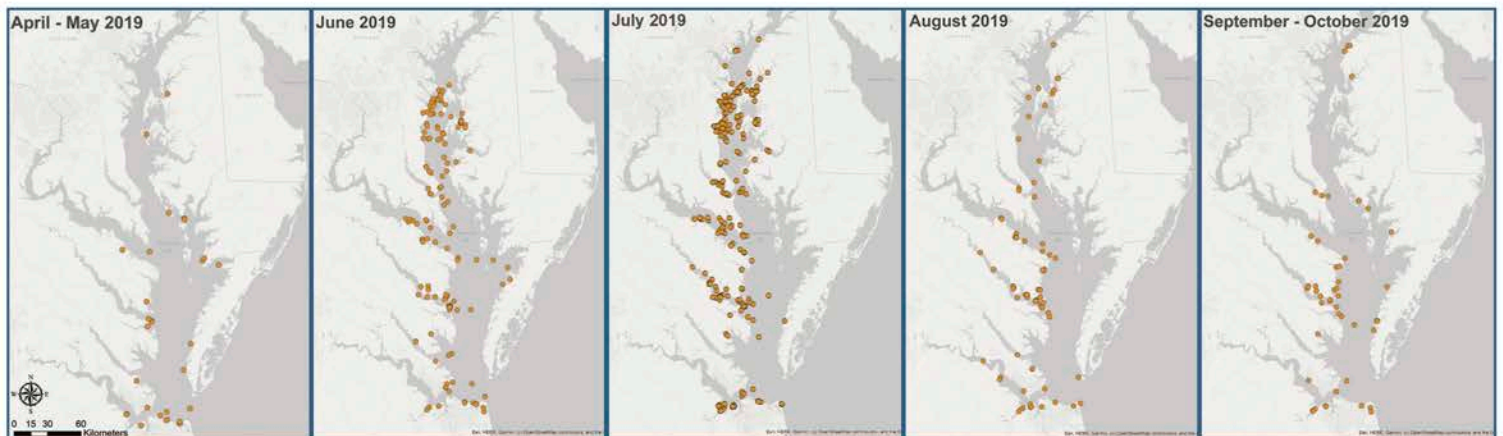
From 2017 to 2019 dolphins were reported in the lower Bay (Virginia portion) nearly year-round, the middle Bay primarily from May to September, and in the upper Bay mainly in June to July (see map panel below). There were many dolphin sightings reported in the Upper Bay, near the Bay Bridge, and Chester River in 2018. The number of dolphin sightings peaked in July in all three years of our monitoring from 2017-2019.

Dolphins have names like we do - they are called signature whistles! We found more than 250 unique dolphin signature whistles recorded on our hydrophone in the Potomac River.



The spectrogram, or visual representation of recorded sound, above shows a signature whistle inside the red box. The colors represent the loudness of the sound with the green showing the dolphin call. This dolphin's signature whistle, which appears like an "M" shape, is repeated two more times to the right of the red box.

Two of the unique signature whistles recorded in the Potomac River were also recorded in the Rhode River in 2018. This tells us that dolphins visit a variety of tributaries and portions of the Chesapeake Bay during the warm months year after year.



Learn more about Chesapeake DolphinWatch: <http://www.umces.edu/dolphinwatch>