From: **Curran, Jessica J CIV USN (USA)** jessica.j.curran.civ@us.navy.mil
Subject: RE: [Non-DoD Source] May 2022 SNI Invasive wrack monitoring trip report
Date: June 9, 2022 at 2:44 PM
To: Ricardo Desantiago rdesantiago@sdsu.edu
Cc: Hoyer, William F CIV USN NAVFAC SW SAN CA (USA) william.f.hoyer2.civ@us.navy.mil, Jeremy Long jlong@sdsu.edu, Suzanne Graham sgraham@spawar.navy.mil

Hey Ric,

Thanks for the reply! It was a weird coincidence but we got KAM and Jen on the same email chain already talking about your mystery Sargassum. I will loop you into that email thread.

Thanks,
Jess

From: Ricardo Desantiago <rdesantiago@sdsu.edu>
Sent: Tuesday, June 7, 2022 2:49 PM
To: Curran, Jessica J CIV USN (USA) <jessica.j.curran.civ@us.navy.mil>
Cc: Hoyer, William F CIV USN NAVFAC SW SAN CA (USA) <william.f.hoyer2.civ@us.navy.mil>; Jeremy Long <jlong@sdsu.edu>; Suzanne Graham <sgraham@spawar.navy.mil>
Subject: Re: [Non-DoD Source] May 2022 SNI Invasive wrack monitoring trip report

Hi Jess,

This email slipped through the cracks, I'm sorry! Yes the site selection is as you stated, we plan on returning to all the same sites as access allows except Dutch Harbor.
And please do connect me with Kathy Ann, I think an introduction would be great!
I have also never met Jennifer Burnaford but if you think its fine, I can send her an email and bug her too!

Thanks,

Ric

> On May 24, 2022, at 2:31 PM, Curran, Jessica J CIV USN (USA) <jessica.j.curran.civ@us.navy.mil> wrote:
>
> Hi Ric,
>
> Thanks so much for the detailed synopsis of your trip.
>
> The site selection is a bit unclear. Are you planning to return to all of the sites listed below (except Dutch Harbor) as access allows? Or are some of them off the table?
>
> I definitely think you should reach out to Kathy Ann Miller on this strange variety of Sargassum. I'm happy to do an intro if you need one. We can also put it out to Jennifer Burnaford at CSUF as I know she's been up and down the coast this year helping different MARINe groups and may have seen

something similar.

Thanks,
Jess

Jessica Curran (Bredvik)

Marine Biologist
NAVFAC Southwest
750 Pacific Highway
San Diego, CA 92132

New email→ jessica.j.curran.civ@us.navy.mil
Office: 619.705.5578
Cell: 661.309.3148

From: Ricardo Desantiago <rdesantiago@sdsu.edu>
Sent: Friday, May 13, 2022 8:51 AM
To: Jeremy Long <jlong@sdsu.edu>
Cc: jessica.curran@navy.mil; Hoyer, William F CIV USN NAVFAC SW SAN CA (USA) <william.f.hoyer2.civ@us.navy.mil>
Subject: [Non-DoD Source] May 2022 SNI Invasive wrack monitoring trip report

Hi all,
I just wanted to provide an update on this week's trip to SNI for invasive wrack monitoring. We were able to obtain data from a total of seven sites, although two of those sites are just zeros and one beach we were not able to enter. We visited Red Eye, Tender beach, Cissy Cove, Dutch Harbor, Bachelor Beach, So. Coast Guard beach, and "artist beach" (not on the map, so we are using this unofficial name).

Surveys Conducted

Wrack line survey (ellipsis surveys)— measure length and width of wrack piles and length and width of *S. horneri* on the surface.
Jenny Dugan's wrack composition survey. Run a horizontal transect at the upper limit of the beach, three vertical transects and identify any intersecting material.
Sargassum time search—a 30 min sitewide search for any *S. horneri*.

Info on the sites

Red Eye—Since this site is accessible throughout the year (provided there are no Western Snowy Plovers) and is not invaded by *S. horneri*, it seems like one of the best sites to continue to monitor for *S. horneri* presence and abundance in the wrack.
Tender Beach—This site may have nesting birds in late spring early summer, but they were not nesting yet (thank you Bill for taking the time to go and survey). We found *S. horneri* here. At this time of the year, the wrack was extremely fragmented and partially buried thanks to pinnipeds and in the fall, it is completely saturated with wrack. I think this site is great to monitor even if it

is completely saturated with wrack. I think this site is great to monitor even if it takes twice as long as others.
Artist beach—without analyzing any data we can see that the wrack already changes dramatically from our last visit in March. Still dominated by *Stephanocystis* but less abundant and overall less wrack on the site. I think it is accessible year-round and makes for a great monitoring site for invasive wrack.
Dutch Harbor—This beach has absolutely no wrack at all. Jeremy hypothesized this would be the case and advised me not to prioritize it. We had a little extra time, so we decided to go see, as expected, no wrack. No further trips to the site seem necessary, as we don't anticipate seeing wrack there.
Bachelor beach—It is bachelor season. We were unable to walk onto the site due to it being completely saturated with elephant seals (likely over 1000). This was one of the very few rocky sites and it's not accessible year-round just like the others.
So. Coast Guard Beach—on our previous trip, we found no wrack piles, only fragmented wrack. This trip the beach was covered in the cleanest sand I have ever seen. Bill told us that we would see a completely different beach this trip since there was a huge sand deposition that basically created a whole new landscape—and that is what we saw.
Cissy Cove—I think this site will continue to show an increase of *S. horneri*. Just like before, we found some *S. horneri*, I have to look at the data, but I think it was more this trip.

Interesting information

Some of the *Sargassum* found on Cissy cove continues to baffle me. Last trip, Jeremy, Bill, and I spent some time debating what species the of *Sargassum* we were looking at. This is not usually the case since we have all gotten pretty good at identifying it. One of the individuals we found on this trip, again, does not look like the *Sargassum spp.* we know.
Just like adult *S. horneri*, the alga in question has elliptical pneumatocysts and a zig zag stipe. To me the blades also look the same shape. However, the receptacles are not "cigar" or "chili pepper" shaped. They are 3-6cm long and about twice the width of the stipe they branch from (See below). Hybrid? Less common morphology?

Conclusion

I think Jeremy and I have a good idea of what sites are accessible and have narrowed it down to these. We will revisit the comparisons we will be able to make (e.g., seasonal, windward-leeward, rocky-sandy), and which sites will be the best for that.
The rapid surveys still seem the most appropriate to get an idea of the wrack composition, and presence and abundance of *S. horneri.*
I am uploading photos to a private google drive today, but I think we should reach out to someone who knows algae better than we do and get some help identifying it. I am happy to do this if anybody has a suggestion of who I should contact. Kathy Ann Miller?

<image001.jpg>

