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RENEW YOUR DUES

Be sure to review your membership profile. Contact secretariat@shellfish.org with questions.

www.shellfish.org

Upcoming Events

115th NSA Annual Meeting: Mar. 26-30, 2023.
Baltimore, Maryland. For more information:
www.shellfish.org

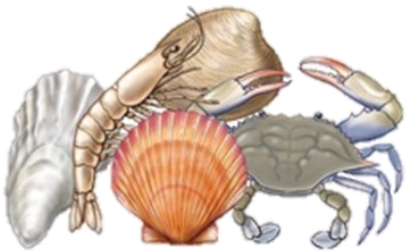
23rd International Pectinid Workshop: Apr. 19-25,
2023. Douglas, Isle of Man. For more information:
<https://internationalpectinidworkshop.org/>

**77th Annual Shellfish Conference (NSA-PCS/
PCSGA):** Sept. 18-21, 2023. Seaside, Oregon. For
more information: <https://pcsga.org/annual-conference>

116th NSA Annual Meeting: Mar. 17-21, 2024.
Charlotte, North Carolina. For more information:
www.shellfish.org

Aquaculture 2025 (Triennial): Mar. 5-9, 2025. New
Orleans, Louisiana. For more information:
www.was.org

If you would like to announce a meeting, conference, workshop, or
publication of interest to NSA members, please contact the *QNL*
Editor, Steven Allen (sallen@bowdoin.edu).



President's Message



As my term as President of the NSA comes to a close, I find myself reflecting on my long association with the organization, its journal, and most of all, its people. I have done many things during my time as an NSA member, including judging student presentations, organizing sessions for the annual meeting, contributing talks at the meeting, publishing in, and reviewing for, the *JSR*, and shucking oysters at some meeting events. The most important aspect of my time with the NSA is the colleagues I have known. For example, I first met Susan Ford in the summer of 1979 at the Duke University Marine Lab where we both were enrolled in the Osmoregulation and Membrane Transport class (taught, in part, by a true giant of comparative physiology—Len Kirschner). Two years later, I found myself part of a crew of post-docs that included one Sandra Shumway. I have a long list of similar personal and professional relationships that are closely associated with the NSA. The point of my doddering nostalgia is that these relationships are invaluable to all of us. I have relied on them for lab and living space during sabbaticals, help with acquiring animals for research, assistance with entry to literature in areas outside my narrow expertise, co-authorship of papers, and perhaps most important, high times and good fellowship. I was on the local organizing committee for an annual meeting in New Orleans many years ago and remember it as organized chaos. The Association now relies on a small, but highly, dedicated group of people to organize the annual meetings, and they now run like a well-tuned engine. I have seen the NSA change over the years to incorporate new fields in biology, such as molecular genetics, climate change, shoreline restoration, and many others. Addition of these areas has not come at the expense of more traditional areas, such as aquaculture, diseases, and shellfish basic biology. This constant evolution keeps the NSA relevant to a wide variety of scientific, regulatory, and commercial stakeholders. We members owe many thanks to the outgoing and incoming officers of the Association for their service. The strength and significance of the organization is due to the increasing diversity of its members. I hope that many of you continue to profit from your interactions with all of us long into the future.

Lewis Deaton, *President*

MEETING REMINDERS

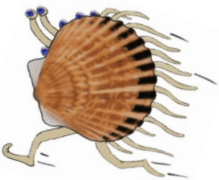


Please consider contributing a film for our **NSA at the MOVIES** - these presentations will be shown continuously throughout the conference, so you can stop in any time you have a chance. Questions: Eric Heupel (eric@heupel.com)

BOOK YOUR HOTEL ROOM:
<https://shellfish.memberclicks.net/annual-meeting---hotel>
PLEASE STAY AT THE MARRIOTT - THE CONFERENCE HOTEL
The conference rate expires on March 3, 2023

REGISTER FOR THE MEETING:
<https://shellfish.memberclicks.net/annual-meeting---registration>
Rates increase after March 1, 2023

The **SCALLOP GALLOP** will take place Wednesday, March 29th at 3 pm. Contact race organizer President Deaton for details.



- In this issue:
- Music Among the Shellfish (Part 1)
 - Castagna Student Research Grant Update
 - Abalone on IUCN Red List

Music Among the Shellfish: Gary Wikfors A Man and his Mandolin

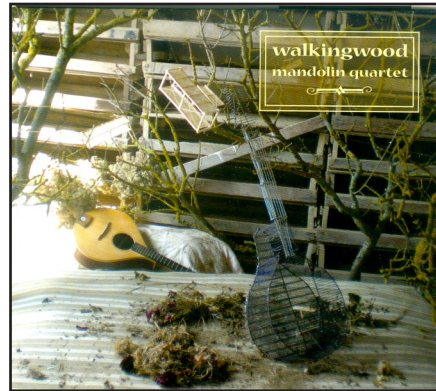
Unlike John Ewart, I was a school band flunk-out. In middle school, I signed up for drums, but I didn't have the patience to play what was written on the page, so I was "cut." Sometime in early high school, I talked my parents into buying me a guitar and a Mel Bay lesson book. The book started with single-note "melodies" written on a staff with photos of a guitar neck and a hand – e f# f# eee / e f# f# b... I could not have been more bored. I had been obsessed with Motown on AM radio and was starting to listen to the FM rock station out of New York, and music was fun and exciting. I had no concept of how to get from that book to radio hits that inspired me to drum maniacally on the front car seat back and get scolded. The guitar and book went into the closet. Through a weird circumstance, I discovered performing before really learning music. My high school had an annual "Pop Show" at which students performed current and passé pop radio fare. In the suburb of New York where I lived, we had many children of famous entertainers as classmates, and the Pop Shows were, to my circle of friends, preposterously precious. A friend who had an older brother in a jug band suggested that we enter the Pop Show with an "act" so unpolished and inappropriate, that we could lampoon the entire scene. With one member able to play three chords on a guitar and the rest of us "playing" kitchen utensils and garden implements, we entered the Pop Show and played and sang a little-known Beatles song, "Don't Pass Me By". Barefoot. In bib overalls. With fake hillbilly accents. When we finished there was a few seconds of silence as the stunned audience of classmates and famous parents tried to understand what had just happened. Then slowly... thunderous applause! Our jaws dropped; we had no idea what to do, but sing the last chorus again and run offstage. In a way, this led to my music life, but there was nothing musical about this piece of performance art/ guerilla theater. The group, "Son Of The Original Synthetic Hickey Goodtime Rinky-Dink Jug Band, Inc." worked up an act of comedy/songs, with me playing washboard, jews-harp, cowbell... So no music content yet.

I actually remember the day music came to life for me. My best friend's parents belonged to an album-of-the-month club and had been sent something they never would have ordered – The Stanley Brothers Hootenanny Special. We opened the sleeve (to the annoyance of my friend's parents because they couldn't return it then) with the cowboy-hatted "old guys" holding guitar and banjo photo, and put it on the stereo. The mountain bluegrass sound of Carter and Ralph Stanley hit me like a Nashville tour bus! I was transfixed by the high-pitched, spooky, "brother" harmony, the driving rhythms, and especially the ringing of the banjo. It was the ultimate in exotic music to a suburban New Jersey kid. I HAD to make that sound! Within a week I had a banjo in my hands and the Pete Seeger "How To Play The Five-String Banjo" book. Pete's approach was much more compatible than Mel Bay's with my limited patience – Pete described how to finger two chords (one of which required no fingers at all) and to sound the strings with the right hand to accompany a song you could sing. I was "making that sound!"

To fast-forward through thousands of obsessive hours of listening and imitating the banjo playing of Ralph Stanley, Don Reno, and less often Earl Scruggs, I was playing straight-up, and modernized, bluegrass music with my jug band friends. In undergraduate school at UMO, I was in bands, I organized bands, and I was bringing in rent and grocery money from bar and frathouse gigs. I got an acoustic guitar and borrowed a Stratocaster and learned enough by osmosis from bandmates to fill in guitar chords when needed, and I found an amazing Gibson A-4 mandolin in a music shop in Portland, Maine, which I bought with gig money and learned the basics of how to play fiddle tunes and old-time song accompaniment. I had become a dedicated record-hunter, venturing well beyond "Will The Circle Be Unbroken" and country-rock acts that were popular in the 1970s and was sourcing material from the 1930s on. Upon graduating from UMO, with grad school more than a year away, I conspired with

my high-school jug band – now bluegrass -- friends to try the life of a touring band. The jug band with the long name morphed into Urban Swampgrass (New Jersey identity), and we made a DIY, chaotic attempt at cobbling living money together from gigs anywhere that would have us. I remember that 15 months as the hardest I have ever worked. Driving ceaselessly between Philadelphia and Boston, sleeping on couches and floors, eating road food... And occasionally playing music. The band learned about entertaining; we could play sets as a bluegrass band, an old-time string band, and a jug band, with costume changes so that audiences weren't always aware it wasn't three different bands. High points of this period include opening for the Grateful Dead at a big outdoor show, being part of a package tour that included a young Del McCourey, and meeting and jamming with many heroes – Ralph Stanley and Don Reno among them – backstage at festivals. While there is a unique confidence that accompanies stepping on a stage with a thoroughly polished show, I also remember feeling mechanical and uncreative cranking out the same songs, jokes, and patter, no matter how perfectly, night after night. I felt less connected to music than before. The life of a professional musician was not for me. My parents were grateful

that I had "gotten that out of my system" while in my early 20s. The high school friends got on with the rest of our lives, although several of them still play jug band music together 50 years later!



The Fiddleheads contradance band, founded 1978, but this personnel since about 1998. Photo credit: Random passerby used Jim's phone.

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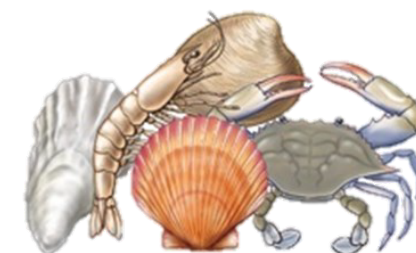
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Recruits Corner

Fellow Recruits,

We hope you are getting into the swing of the spring semester, and looking forward to the upcoming annual meeting in Baltimore, Maryland, March 26th-30th.



Make sure to renew your student membership to take advantage of the student member prices! Costs for late registration will increase after February 23rd. Need a room or have a room to share for the conference? Check your email for the student room share document, or contact Hannah or Fiona for more info.

We are planning a number of fun, student-oriented events at the conference. Activities include a student field trip to the National Aquarium, Mentor-Mentee breakfast, a student outing in Baltimore, a workshop on public science engagement, and then there is the Student Endowment Fund Auction, and much more! Watch your email as we continue to send out details and updates.

During the conference as we coordinate these events, we will be using the NSA Baltimore 2023 Recruits Discord Server to send out details and updates. Discord is available for both iOS and Android, and will allow us to communicate logistics for events, as well as facilitate interactions and conversations between all the Recruits. The link to this Discord Server will be sent to Recruits over email - please do not share the link.



Recruits who have received Student Endowment Fund Travel Awards will be required to volunteer their time at the conference. Sign up sheets for time slots have gone out, so make sure to sign up. We also welcome any other Recruit who would like to volunteer. Your time and assistance is what makes this conference run smoothly every year!

Stay in the loop by checking the Recruits webpage (<https://www.shellfish.org/student-members>), joining the Recruits Facebook group (<https://www.facebook.com/groups/2216454881732029>), and following the NSA on Instagram (@nationalshellfisheries).

As always, please do not hesitate to reach out if you have any questions to Fiona or Hannah (fboard@uw.edu; hannah.i.collins@uconn.edu). See you in Baltimore.

Hannah and Fiona

NEW PAID LIFE MEMBERS

Thank you, Lou D'Abramo & Joth Davis

Log-in to renew and update your membership status (www.shellfish.org), or contact the Secretariat with any questions (secretariat@shellfish.org)

NSA Pacific Coast Section News

Winter in the Pacific Northwest means it is time for the PCSCG/NSA-PCS Annual Conference and Tradeshow Planning Committee to start working on 2023 conference details. This year the conference will be held at the Seaside Conference Center, in Seaside, OR from September 19-21, 2023. For the next few months, the Planning Committee will be working on a new registration format, agenda topics, and the auction details. If you would like to present at the upcoming conference, presentation titles, a talk description or abstracts, and workshop titles will be accepted starting April 15th. If you need any more information on the conference, please contact NSA-PCS Chair Sandy Zeiner (szeiner@nwifc.org).

This year the PCSGA and the NSA-PCS will be co-sponsoring a new annual "Dr. Kenneth Chew Research Scholarship" in honor of the late Dr. Kenneth Chew. Please be on the lookout for details on the research scholarship and on how to apply.

If you have not renewed your 2023 NSA membership dues, please do, and do not forget to check the PCS box and pay an extra \$10 to be a part of the Pacific Coast Section of NSA.

The NSA-PCS Facebook page is your best resource for news and information about the Pacific Coast Section and events and annual meetings. Please join our community online (<https://www.facebook.com/pages/Pacific-Coast-Section-of-the-National-Shellfisheries-Association/1438569826443936>).

Sandy Zeiner
Pacific Coast Section Chair



**JSR Article Featured
on BioOne**



The *Top & Trending Research* from BioOne
January 2023 collection:

"Larval thermal tolerance of Kellet's Whelk
(*Kelletia kelletii*) as a window into the resilience of
a wild shellfishery to marine heatwaves"

by Xochitl S. Clare, Li Kui, and Gretchen E.
Hofmann

Congratulations!

Grad school brought me to Connecticut and the Milford Lab and a new music community. I half-heartedly bumbled around in places I heard that folk musicians gathered, including a banjo manufacturing shop in, of all places, Bridgeport, where I met lots of... other banjo players. With the machine-gun scattering of notes created by the bluegrass banjo style, two banjo pickers equals one too many. To fit in, I leaned into my guitar playing and learned verses and choruses to a couple of hundred songs that other banjo players would like. I was picked up as a side-man by the Jackson Pike Skiffers, a family old-time band led for decades by banjo player Will Tressler. I spent the next 20 years as a Skiffler, playing 2-3 gigs a weekend on guitar and occasionally mandolin. I also was in and out of a few short-lived bluegrass bands (some really good ones) and filled in many ensembles when regular band members had to cancel, playing either guitar or mandolin. My banjo playing atrophied. The traditional music community in Connecticut was, and is, active and friendly, so my weekend music life was enjoyable, social, and fulfilling in its diversity. Eventually I parted with the Skiffers and further integrated myself into the informal, traditional music scene, including playing for contradancing with the Fiddleheads – a group of which I remain a member 40+ years later. I was working at the Milford lab for a few years before I could say I was earning more dollars from science work than from music.

Increasingly, alone-time found me gravitating to the mandolin. I had been inspired by an acquaintance in the New Jersey music scene, Barry Mitterhoff, who had introduced me to larger cousins of the mandolin – mandola and mandocello. I had had another "I HAD to make that sound!" experience when Barry put his mandocello in my hands backstage one evening. After many years of searching, I found a mandocello for sale and went back into obsessive practice mode. A mandola soon followed, and I developed a fantasy of arranging tunes for mandolin quartet consisting of two mandolins, mandola, and mandocello – the so-called "quartetto classico" that mirrored the violin-family string quartet. My concept was not to play classical music, as is the norm, but to arrange folk, pop, ethnic, and melodies familiar to everyone (think TV-show themes) for this instrumentation. Multitrack cassette recorders had become available, allowing one to "play with yourself" so to speak, so I started arranging and recording mandolin quartets playing all four parts myself. Wanting to hear this sound "in real life," I invited three music acquaintances to join "The Walkingwood Mandolin Quartet" using carefully-composed emails mimicking a research proposal – stating the objective, what I was asking each to do, and listing the benefits to all. After 22 years, and a CD album along the way, the WMQ still is playing as often as a mandolin quartet can be tolerated by the local music community.



The Walkingwood Mandolin Quartet, founded in 1999, and continuing to perform. Photo credit: Marilyn Catasis

I also have played with several other bands, some of which have been victims of the pandemic, including a traditional bluegrass band named Lost Dog ('Our posters can be found on phone poles throughout this great land!') and the ZuZazz String Orchestra. I have played mandolin for a decade now in the acoustic country music septet Goldrush, that continues to play outdoor, summer concerts in central Connecticut.

But in the meantime, I had been the victim of another "I HAD to make that sound!" moment when I bought (on a whim) a used CD by the Swedish trio Väsen and heard for the first time (despite my Swedish heritage) the sound of a nyckelharpa. The nyckelharpa ('key-harp' in Swedish) is the national folk-music instrument of Sweden – similar to what the banjo is in the US, so my serial fascinations have some consistency. Another multi-year search led to the acquisition of a nyckelharpa (made in France, rather than Sweden) and a stumbling path to learning how to first hold and finally play a bit this "exotic" instrument that I had never seen in person before unboxing my own. At least this time, there was YouTube on which to watch native players in Sweden for clues as to how to start. According to traditional wisdom, during the first ten years, one is "learning" to play an instrument; thereafter, one is "playing it." I am still in my "learning" period with the nyckelharpa, but am playing informally with friends and even bringing the instrument to the public in a low-key (pun intended) way.

At the end of this detailed music-life story that paralleled my science life, if you're still reading, what can a shellfish scientist take away? It can be possible to enjoy playing music without benefit of formal education (unlike being a research scientist) if you are motivated and enjoy the physical act of making noise. Music and natural science both have a fundamental basis in mathematics – in music, it's all about intervals of time and pitch in relation to each other, not too unlike physiological and ecological processes that can be described quantitatively as multidimensional relationships. Performing music for an audience can help build confidence for communicating science to peers and the public – stage fright fades with repetition. If your music life is social – you're not a virtuoso soloist struggling in isolation against your own limitations (if you are this creature, I am sorry for you) – a music avocation is an opportunity to discover another, "hidden" community where you live (there is a folk music underground everywhere). And playing music with others is the best teacher of how to collaborate – recognizing the value each participant brings and accepting limitations all 'round. Finally, I like to think that exercising musical creativity – I have composed hundreds of songs and tunes – helps sharpen the creativity needed to imagine, devise, and accomplish original scientific research. It should not be surprising that many scientists also are musicians.

Gary Wikfors

2022 Michael Castagna Student Research Grant Update

Awardee: Tara Plee

Rhode Island University

“Determining key factors that prevent sustainable growth of the threatened green sea urchin industry”

The green sea urchin (*Strongylocentrotus droebachiensis*) fishery in Maine has declined since the 1990s, and the Department of Marine Resources (DMR) have worked towards sustaining natural stocks through harvesting restrictions. These include an upper size limit (>3”) with the assumption that these generate large gonad tissue and yield higher reproductive output, yet there is limited evidence to support this notion. A DMR survey during the 1990s assessed seasonal changes in urchin gonad sizes where sudden reductions can indicate that a spawning event has occurred; however, this is not a reliable measure for reproductive success which can only truly be addressed by incorporating spawning and gamete crosses towards larval production. It is therefore possible that oversized individuals may no longer be reproductively viable and therefore hindering population growth. To address this knowledge gap, this project is in collaboration with the DMR and regional harvesters with decades of experience to assess the reproductive viability of oversized green sea urchins compared to smaller size groups.



Diving harvesters hand collected 40 oversized (>3”) and 40 smaller legal sized individuals (~ 2 1/16”) from two sites in the Gulf of Maine (Fishing Zone 2, Region 5). Immediately following collection, animals were measured for their somatic measurements (body mass and size) and the dissected to gain data for the gonad index (gonad mass/body mass expressed as a percentage), gonad color, and gut content. Gonad color can act as proxy for nutritional food supplies needed for generating viable gametes. From the dissections, one gonad lobe was preserved for histological assessment of the reproductive stage. These measurements can tell us about gonad development and timing of the reproductive season. To confirm whether these animals are

reproductively viable, up to 15 animals of each size group and per site were spawned to measure their fecundity, egg size, and fertilization and hatching success after their gametes (eggs and sperm) were crossed. This was achieved through injection of 1-2 mL 0.5 M KCl and the eggs and sperm were collected into 1-L jars containing 0.2 µm filtered and UV sterilized seawater. To measure fecundity, eggs released into jars were gently mixed and 1 mL subsamples were counted using a Sedgewick rafter cell counting grid and calculated for total number of eggs released per individual. Subsamples were fixed with 4% formalin so that egg sizes can be measured. Individual males were crossed with individual females (n= 4-5 per sex, per site, per size class). To achieve this, eggs were evenly distributed across three replicate 20 mL vials containing 0.2 µm-filtered and UV-sterilized seawater and sperm from individual males were introduced achieve a 1:250 egg to sperm ratio. Samples were fixed with 4% formalin after 1 hour to determine fertilization success and again at 48 hours to determine hatching success. These spawns were very recently conducted at the time of writing of this update (January 2023), so data collection is still ongoing. Eggs are currently being photographed using a digital camera mounted microscope with a 1 mm graticule and will be analyzed in Fiji to determine egg diameter for up to 300 eggs per female. Egg size can provide insights into energetic investment, with greater investment leading to larger eggs. Fertilization and hatching success are yet to be measured and will be achieved by using a compound microscope and counting cell under a fume hood to determine the reproductive viability of the different sized individual green sea urchins.



A preliminary look into the data indicates that gonad index and fecundity in oversized green sea urchins are not greater than smaller size groups. Further data exploration and analysis are required once sample processing has been completed to confirm whether oversized individuals are reproductively viable or not. I look forward to sharing more on this research in the near future and would like to thank the National Shellfish Association for the Michael Castagna Student Research Grant opportunity for making this work possible.

Photo ID Challenge from QNL 2022n4

There is no winner because there were no submissions – nobody even identified themselves! Answers: 1) Al Chestnut; 2) Scott Siddall; 3) Ken Chew; 4) Dan Quayle; 5) Neil Bourne; 6) Harry Davis; 7) Arlene Longwell; 8) Robert R.L. Guillard; 9) Victor Loosanoff; 10) Paul Chanley; 11) Bill Dewey; 12) Karolyn Hansen; 13) Jay Parsons; 14) Jeff Springer; 15) Dane Frank; 16) Steve Allen; 17) John Scarpa; 18) Greg Rivera; 19) Sandy Shumway; 20) Nature McGinn; 21) Missy Southworth; 22) Greg Pace; 23) Mike Castagna; 24) Mel Carriker. 25) Bonus: All Southampton College alums.

Update from the NSA Student Endowment Fund Committee

As part of the 115th Annual meeting of the National Shellfisheries Association, to be held in Baltimore, Maryland, from March 26 – March 30, 2023, the NSA Student Endowment Fund (SEF) Committee supports great opportunities for graduate student members of the NSA that plan to present their original research.

Student Travel Awards

The upcoming meeting in Baltimore is the fourth meeting to use the lottery system to allocate student travel awards. Of the 58 applications that were received by the committee, 18 students were randomly selected to receive either free lodging or a registration waiver for the meeting. This funding is only possible through the continued support from donations from member of the NSA, with the primary fundraiser being the annual student auction. So, if you plan to attend the meeting in Baltimore, be sure to attend the Student Endowment Fund Auction scheduled for the evening of Tuesday March 28th. Every donation helps!!

Student Presentation Awards

The SEF Committee has identified eligible graduate students for the Nelson and Gunter Awards, based on cross-referencing the lists of graduate student presentation abstracts submitted and current NSA student members. The Committee is extremely grateful to Noreen Blaschik for her assistance in generating these lists. Based on this process, 59 oral presentations and 14 poster presentations have been identified as eligible to be judged for the Nelson and Gunter awards, respectively. Attendees were able to indicate their willingness to judge student presentations during both the registration process (n=70) and during the abstract submission process (n=102), which together yielded a cohort of more than 130 potential judges for the meeting. This is a much greater number than in recent years. The SEF Committee wishes to thank everyone that participates in this process in support of the NSA students.

More information about the travel and presentation awards can be found at: <https://www.shellfish.org/sef-student-presentation-and-travel-awards>

Peter Kingsley-Smith
Melissa Southworth

Abalone enter the IUCN Red List as threatened with extinction

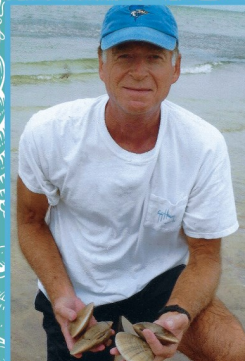
The IUCN Red List now includes 150,388 species, of which 42,108 are threatened with extinction. Over 1,550 of the 17,903 marine animals and plants assessed are at risk of extinction, with climate change impacting at least 41% of threatened marine species. Twenty of the world's 54 abalone species are now threatened with extinction, according to the first global Red List assessment of these species.



In South Africa, poaching by criminal networks, many connected to the international drugs trade, have devastated populations of the Endangered perlemoen abalone (*Haliotis midae*). Increasingly frequent and severe marine heatwaves have caused mass mortalities, killing 99% of Roe's abalones (*H. roei*) in its most northerly reaches of Western Australia in 2011. Marine heatwaves have exacerbated abalone diseases worldwide, affecting the Critically Endangered black abalone (*H. cracherodii*) in California and Mexico, and the Vulnerable green ormer (*H. tuberculata*), found from the English Channel to Northwest Africa and the Mediterranean. Marine heatwaves also kill the algae that abalones depend on for food. Pollution from agricultural and industrial run-off cause harmful algal blooms, which have eliminated the Endangered Omani abalone (*H. mariae*), a commercial species found in the Arabian Peninsula, across half of its range. Toxins such as antifouling boat paint further deplete populations.

“Abalones reflect humanity's disastrous guardianship of our oceans in microcosm: overfishing, pollution, disease, habitat loss, algal blooms, warming and acidification, to name but a few threats. They really are the canary in the coalmine,” said Dr Howard Peters, member of the IUCN SSC Mollusc Specialist Group and research associate at the University of York, UK, who led the abalone assessment. “The most immediate action people can take is to eat only farmed or sustainably sourced abalones. Enforcing fishery quotas and anti-poaching measures is also critical. However, we need to halt the changes to ocean chemistry and temperature to preserve marine life including abalone species over the long term.”

Source: <https://www.iucnredlist.org> (December 9, 2022)



BRUCE J. BARBER, PH.D.
11/06/1951 - 9/16/2022
Donations in Bruce's name may be made to:
1. Bruce J. Barber, Ph.D Fellowship in Marine Science at USF,
2. Bruce J. Barber Memorial Internship at Gulf Shellfish Institute, or
3. Dr. Etame's Brain Cancer Research at Moffitt Cancer Center.
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