



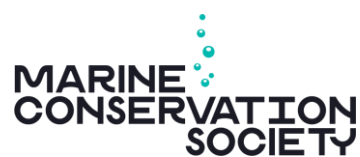
2021 Scotland Report



Cover photo Owen Paisley

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Seasearch is funded and supported in Scotland by:



Contents

Introduction	3
Diving activities	3
Statistics	3
Seasearch Events	3
Arran Seasearch	4
Seasearch Clyde weekend	6
Seasearch Millstone Point and Cour	7
Seasearch Eyemouth	8
West Loch Tarbert and Campbeltown Loch	8
Species:	9
Courses	10
References	10
Acknowledgements	10
Appendices	12

Introduction

The year 2021 was similar in many respects to 2020 in that diving activities were curtailed to a high degree by the restrictions imposed for the Coronavirus pandemic. However, although two Seasearch dive trips in April/May that had been postponed from 2020 were further postponed to 2022 or 2023, several Seasearch trips did take place later in 2021 in addition to the many diving events organised by individuals and groups around Scotland that yielded records.

Diving activities

Statistics

Dive trips to Skye and Kinlochbervie were amongst those postponed to 2022. Seasearch divers acting on their own initiative had started a trickle of completed form submissions from snorkelling and diving from as early as March 2021. Submissions gathered pace from about June until by the end of the year 256 forms had been submitted (compared to 202 in 2020), the locations of which are shown in Figure 1. It was particularly pleasing to see records coming in from all corners of Scottish waters, from the usual favourite accessible sites on the east and west coasts to more far-flung locations, including the Solway Firth, the inner and outer Hebrides, Orkney, Shetland, the spectacular north Scottish coast, and the magnificent North Rona and westernmost rocky islets and pinnacles. The total comprised 117 Observer forms, and 139 Surveyor forms.

Some 150 of the records came from within the boundaries of one or other of the various types of marine protected area (MPA). The MPA with the most Seasearch records in 2020 was the Berwickshire and North Northumberland Coast Special Area of Conservation (SAC). On the west coast the most recorded MPA was the Loch Sunart to the Sound of Jura nature conservation MPA (NCMPA), followed closely by the Loch Creran NCMPA, the Upper Loch Fyne and Loch Goil NCMPA and the Lochs Duich, Long and Aish NCMPA.

Overall, the Scotland 2021 dataset comprised 11,484 (6,242) taxonomic records (not all identified to species) and 395 biotope or habitat records. Points of interest are noted below. The Priority Marine Feature (PMF) records (species and habitats/biotopes) are listed in Appendices 1 and 2 respectively, along with an indication of the general location and abundance where appropriate.

Seasearch Events

Despite the continuing postponement of trips earlier in the year due to restrictions, four organised trips went ahead in Scotland in 2021.

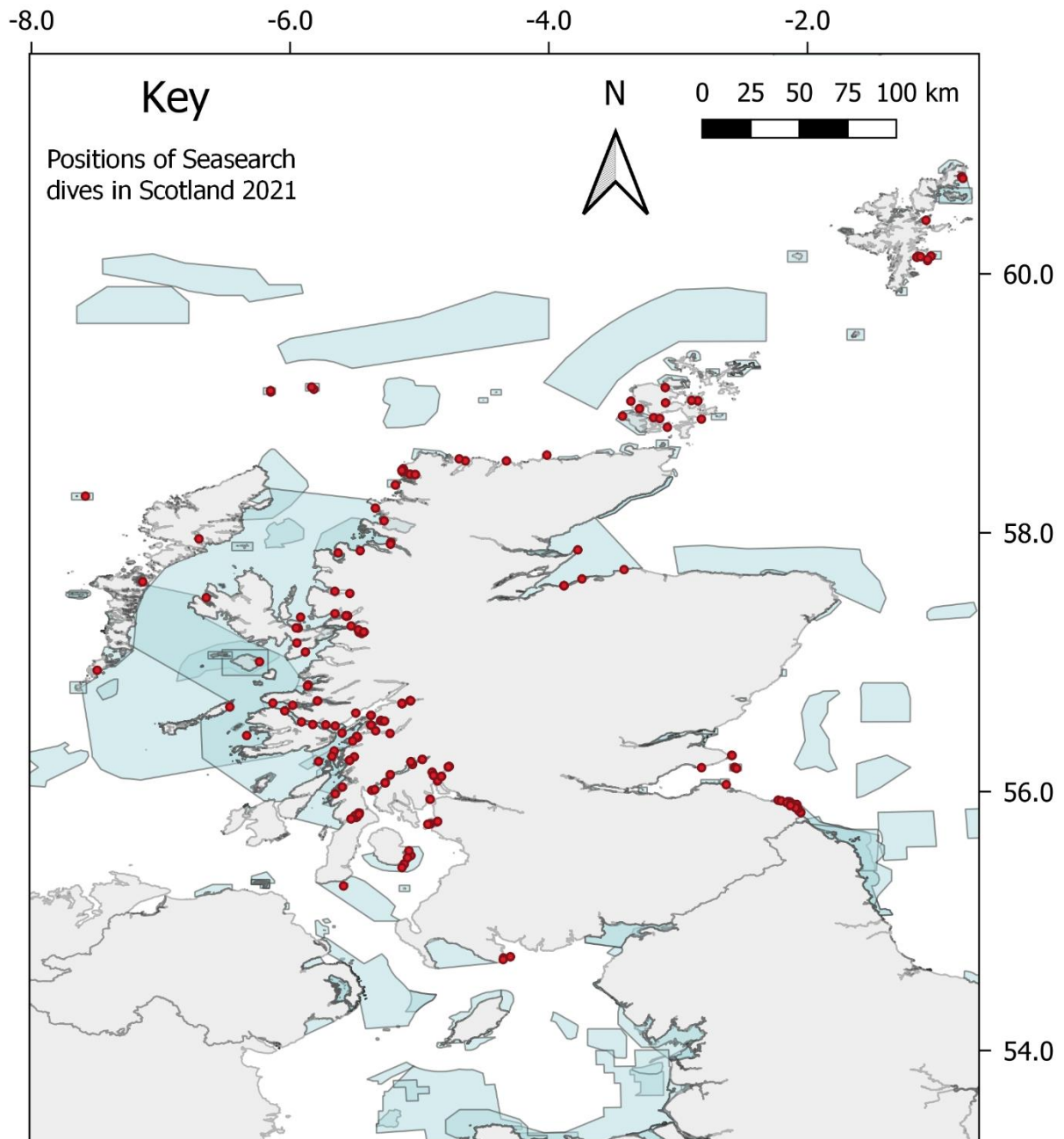


Figure 1 Seasearch survey locations in relation to designated MPAs around Scotland 2021

Arran Seasearch

In truly magnificent warm summer sunshine over June 27 – July 3, a six-strong dive team led by Lucy and Paul Kay undertook survey dives to collect data for the Community of Arran Seabed Trust (COAST) from within the South Arran Marine Protected Area (MPA) and associated no take zone. Jason Coles of Wreckspeditions provided boat transport and cover, as well as cafeteria service including homemade flapjacks.

Highlights from this week included several firsts for Arran, including a record of the diminutive goby *Lebetus scorpioides*, a streaked gurnard *Chelidonichthys latoviza* (also only the second record for Scotland), and a Norway goby *Pomatoschistus norvegicus*, together with the notable presence of the hydroid *Schizotricha frutescens* in only 12 m of water within the

Lamlash Bay no take zone (it is usually found in water depths of more than 20 m). Spoon worms *Bonellia viridis* were recorded at Millstone Point and North of Sannox off Arran's east coast, while confirmation was also obtained of the continued presence of a flame shell *Limaria hians* bed by Pladda, and large numbers of the monkey puzzle bryozoan *Omalosecosa ramulosa* at a site in the northeastern part of the South Arran MPA.

Along with the gorgeous weather, the sea was a brilliant blue colour due to a coccolithophore bloom that afflicted much of the Firth of Clyde through June last year, and which reduced underwater visibility somewhat. Much of the seabed and associated life was decorated with clumps of white material, presumed to be dead coccolithophores and individual coccoliths (see Kipling, 2022, for an account of these observations). In addition, the presence of the bloom was also reflected in accumulations of unusually pale-coloured faecal pellets from the filter-feeding tubicolous polychaete *Chaetopterus variopedatus* (parchment worm).



Some of the survey team enjoying the sunshine at Holy Isle, Arran (Iain Dixon)



Streaked gurnard *Chelidonichthys lastoviza* (Sarah Bowen)



Diminutive goby *Lebetus scorpioides*, Arran (Paul Kay)



Spoon worm *Bonellia viridis*, Arran (Paul Kay)



Monkey puzzle bryozoan Omalosecosa ramulosa, Arran (Sarah Bowen)



Parchment worm Chaetopterus variopedatus and white faecal pellets, Arran (David Kipling)



The hydroid Schizotricha frutescens, Arran (Sarah Bowen)



Jeffries goby Buenia jeffreysii, Arran (Paul Kay)

Seasearch Clyde weekend

With numbers still restricted, five Seasearchers assembled at the Holy Loch marina for diving, fun and recording over the weekend of July 17-18. Borne away on Wreckspedition's Starfish Enterprise, six sites in Lochs Long and Goil were visited, together with the obligatory lunch break at the wonderful Boat Shed café.



The survey team at Wreckspedition's base, Holy Loch (Iain Dixon)



The sandy creeplet anemone Epizoanthus couchii, Loch Goil (Sarah Bowen)



Horseman anemone Urticina eques, Loch Long (Iain Dixon)



Yellow encrusting sponge Aplysilla sulfurea, Loch Long (Sarah Bowen)

Seasearch Millstone Point and Cour

Seasearch dives were undertaken at the proposed locations for two new open cage salmon farms - one off the undeveloped northeast coast of Arran at Millstone Point in early July and the other just north of Cour on the east side of the Kintyre Peninsula in August 27-29. Although no priority marine habitat or species were recorded, the Seasearch surveys recorded some unusual species records and provided a more substantial species list than that recorded in the visual survey reports statutorily prepared for the proposed fish farm developments.



Everything stops for a dolphin flypast at Cour (Iain Dixon)



Dolphins! Always intensely exciting when they appear (Iain Dixon)



Jeffries goby Buena jeffreysii, Millstone Point (Sarah Bowen)



Painted goby Pomatoschistus pictus, Cour (Iain Dixon)

Seasearch Eyemouth

Over the weekend of September 25-26, eleven Seasearchers joined Marine Quest's Jacob George, skippered by Iain Easingwood, for a weekend of diving, marine life recording and photography. Those present included a good mix of new as well as experienced Seasearchers, which presented opportunities for mentoring, both during the dives and afterwards when filling in forms. Six sites were dived, ranging from Fast Castle Head north of St Abbs, to Brissits, off Burnmouth Harbour south of Eyemouth. The excellent facilities at Marine Quest in Eyemouth, including café and lounge areas for post-dive coffees and chats, were invaluable to everyone for reviewing photographs and form filling.



Meeting and kitting up on the Jacob George, Eyemouth (Iain Dixon)



Seasearch team, Eyemouth (Iain Easingwood)



Janet Folland Seasearching, Brander (Iain Dixon)



Post-dive form filling and mentoring, Eyemouth (Iain Dixon)

West Loch Tarbert and Campbeltown Loch

Small groups undertook Seasearch diving in West Loch Tarbert and Campbeltown Loch through the year, where valuable information on native oyster distribution was collected. Highlights included the mapping of a 1 km-long eel grass bed in West Loch Tarbert by a team of Seasearch snorkellers. A less happy discovery was more evidence of past serpulid reefs in the Loch.

Elsewhere, two large native oysters beds were also surveyed by another team of snorkellers.



Seagrass *Zostera marina*, West Loch Tarbert (Owen Paisley)



Evidence of past serpulid reefs, West Loch Tarbert (Owen Paisley)

Species:

As in 2020, the most frequently recorded taxa through 2021 were the various kelp species, the common starfish *Asterias rubens*, encrusting pink calcareous algae, the common sea urchin *Echinus esculentus* and the tubeworm *Spirobranchus* sp. All of the benthic species most abundantly characteristic of Scottish coastal waters were also well represented, including dead men's fingers *Alcyonium digitatum*, sea loch anemones *Protanthea simplex*, the long-clawed squat lobster *Munida rugosa*, solitary sea squirts (especially *Ascidia mentula*, *A. virginea*, *Ascidiella aspersa* and *Ciona intestinalis*) and feather stars (mainly *Antedon* spp.).

There was a focus on shallow snorkelling surveys during 2021, particularly on the west coast, which resulted in an increase in reports of some rarely records species such as native oysters. Shore surveys also produced some interesting records, including a bed of *Ascophyllum nodosum* ecad *mackayi* at Loch Melfort.

On the rarer side of things, there was a first record for the east coast near St Abbs Head of the nudibranch *Hancockia uncinata* in September (several individuals). As mentioned above, the diminutive goby *Lebetus scorpioides* and a streaked gurnard *Chelidonichthys latoviza* were also recorded around Arran (the streaked gurnard is only the second ever record for Scotland). Species that are undoubtedly under-recorded in Scotland's waters, but which are increasingly being spotted by keen Seasearchers (often as 'bycatch' in photographs) include the numerous but cryptic and easily overlooked brachiopods such as *Novocrania anomala*, foraminiferans, small inconspicuous hydroids, the whip-building amphipod *Dyopedos* sp. and tiny cryptic tubicolous polychaetes such as *Euchone* spp.



Native oysters *Ostrea edulis* (Owen Paisley)



Crofter's wig *Ascophyllum nodosum* ecad *mackayi*, (the bladderless unattached form of the egg wrack *A. nodosum*), Loch Melfort (Owen Paisley)



Nudibranch Hancockia uncinata near St Abbs Head
(Iain Dixon)



Whip-building amphipod Dyopodos sp, north coast
Scotland (Iain Dixon)

Courses

Observer courses continued through the year, all conducted using the Zoom platform. First trialled in 2020, this format has proved to be workable and successful and three online courses were held, attended by a total of 39 candidates. Owen and Karen ran the first course in February, observed and assisted by Iain and Paul together with Sarah Bowen. Owen and Karen also ran a further course in May, catering mainly for Ullapool-based snorkellers together with remote operated vehicle (ROV) operators looking to use ROVs to gather data for the Seasearch programme. Iain and Paul ran their first Observer course in April, where all students were technical divers from Project Baseline UK.

The benefit of running courses online during the pandemic is that students can attend from any location in the UK or Ireland. At the same time, it has meant that it has been difficult to integrate a diving day into the course, where tutors can dive with students and assist them in completing their first forms. Through the second half of 2021 however, Scottish coordinators started to advertise and run diving and snorkelling mentoring days at different locations around Scotland, to try and encourage new Observers to put theory into practice. This evolved into a system where we were aiming to provide one mentoring day per month from the latter part of 2021 onwards.

References

Kipling, D (2022). Field observations of an inshore bloom of the coccolithophore *Emiliana huxleyi* (Firth of Clyde, 2021). *Porcupine Marine Natural History Society Bulletin* 17 pp 46-50.

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We would also like to thank all skippers and crews of the many charter vessels working around the Scottish coast who have managed to take divers out safely and happily under the pandemic conditions prevalent through 2021.

We gratefully acknowledge the permission granted by several Seasearch photographers to reproduce the images shown in this report.

Appendices

Data normally published annually on the Priority Marine Species and Biotopes recorded will be added as appendices once the 2021 dataset is finalised.