

Envirotalk



GOVERNMENT OF BERMUDA
Department of Environment and Natural Resources

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TO PROTECT BERMUDA'S ENVIRONMENT AND RESPONSIBLY MANAGE ITS NATURAL RESOURCES

WELCOME

to our spring edition of Envirotalk.

In this issue –

- Learn about community efforts to **cull invasive lionfish** during the January tournament
- Get familiar with the **seasonal closed areas** for Red Hind, Black Grouper and Blue-striped Grunt
- Read about recent training on **disentangling whales**
- Learn about Bermuda's participation in an Overseas Territories **biosecurity** project.
- See our **News & Notices** for reminders and upcoming events
- **Check out our Environmental Calendar** to see what environmental events are happening at this time.
- See the **Planting Calendar** to get a head start on what to plant this Spring.



Whale disentanglement workshop (Photo Roma Hayward)

Please contact:

Envirotalk mailing list: envirotalk@gov.bm to be placed on the mailing list or for suggestions for future articles.

WORKING WITH THE COMMUNITY TO CONTROL INVASIVE LIONFISH

This January saw Bermuda's 5th annual Winter Lionfish Derby take place, with 68 participants (12 free-diving teams and 7 SCUBA teams) taking advantage of great weather at the start of the year. Nearly 250 lionfish were caught in the first week, and a total of 849 lionfish were caught during the month-long tournament. This was a 36% increase from the 2018 derby, when 624 lionfish were caught.

The idea for the Winter Lionfish Derby came from Corey Eddy (now Dr. Eddy!) in 2015, as a way to collect data for his research, because there were no lionfish samples from the winter months. That first year, just 10 participants caught a total of 80 fish! The level of participation and the number of fish caught has increased each year, and the event, particularly the awards ceremony / wrap party really brings the lionfish culling community together. These are the dedicated cullers who go out year round and make a significant contribution to the removal of lionfish from Bermuda's waters, and the Department of Environment and Natural Resources certainly appreciates their efforts.

The top three freediving teams managed to catch 561 fish, 66% of the total haul, many of which ended up in local restaurants and grocery stores as part of the culler vendor programme supported by the Department. A number of lionfish were also donated for the wrap party catering. Although it's difficult to estimate how much of a dent we made in the local population, rough calculations suggest that removing these fish may have prevented up to 500,000,000 lionfish eggs being spawned this year alone!

Whether it is because of lower temperatures, changes in light levels, or just differences in behaviour, lionfish seem to be more common in shallow waters during the winter months, making them easier to target. As Dr. Eddy noted, "It's pretty cool to see that nearly a quarter of all lionfish culls reported in Bermuda have been in one of the Winter Lionfish Derbies, at an average capture depth of 20 ft." Anyone can view recent culling reports via the reporting database link at www.lionfish.bm.

Thanks to support from the Bermuda Zoological Society and Bermuda Aquarium Museum and Zoo, the awards ceremony was held in the main aquarium hall. Goslings generously provided a variety of beverages for the bar. Thanks to financial support from the Bermuda Lionfish Task Force, Lindo's, Marine Locker, Gorhams, Atlantic Lionshare, OnIT IT Consulting, BlueShark Consulting, and Atlantic Mooring Maintenance, cash prizes for first, second and third place provided significant motivation for both the freedivers and SCUBA divers. Additional prizes were provided by Makin

Waves, Dive Bermuda, Blue Water Divers, Blue Hole Water Sports, Goslings, La Garza Jewelry, and the Bermuda Underwater Exploration Institute. Logistical support was provided by Conyers Imports Ltd. and a number of enthusiastic volunteers. We are very grateful for the ongoing support from the community and these very generous sponsors.

DENR is working with the Bermuda Lionfish Task Force and community partners to promote quarterly tournaments in various forms in order to maintain consistent lionfish removal efforts throughout the year. The next tournament will be the Makin' Waves Spring Splash, which will run for "a week plus a weekend" starting at sunrise on Friday March 29th, with the weigh-in scheduled for Sunday April 7th. Stop by the Makin' Waves store on Church Street to register, any time from March 1st, or visit the Makin' Waves Facebook page for more information. After a hiatus in 2018, it is anticipated that the long-standing Groundswell summer tournament will run as usual in July this year.

Dr. Joanna Pitt, Marine Resources Officer



Lionfish speared during the January tournament (Photo: Stuart Joblin)

RED HINDS, BLACK GROUPERS AND BLUE-STRIPED GRUNTS AT THE SPA

Spring is in the air, and in the water, which means that summer is on its way. And with summer, comes spawning. Since the 1970s, certain areas in the waters around Bermuda have been closed to fishing during the summer months in order to protect hinds and groupers from excessive fishing when they come together in large groups to spawn. These areas became known as the “Hind Grounds” or “Grouper Grounds”. In 2007, a Blue-striped grunt spawning area was added to the list of Seasonally Protected Areas, or SPAs.

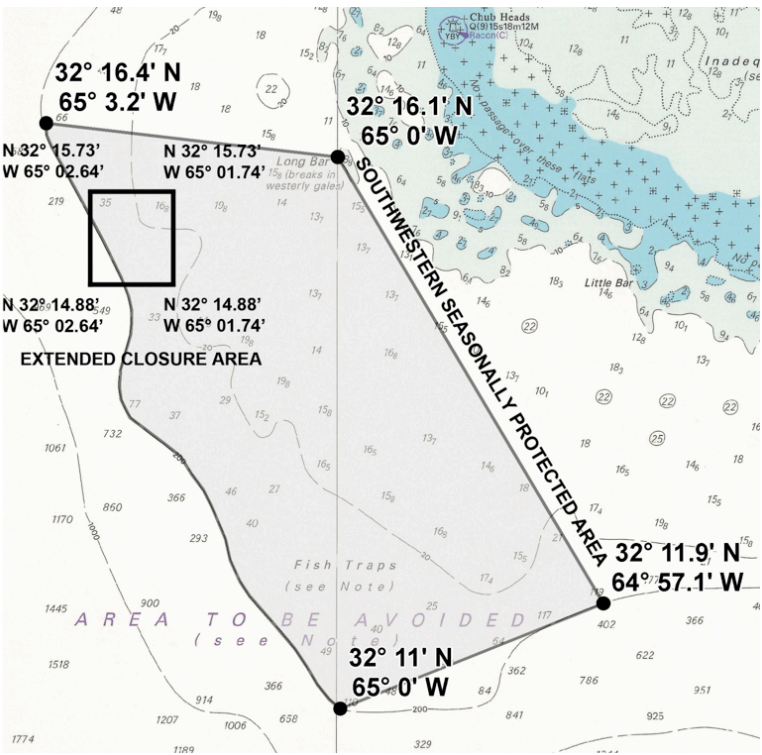
In the past, the boundaries of the “Hind Grounds” were defined based on landmarks and compass bearings, but this unnecessarily restricted fishing in areas closer to shore when the important spawning activity was actually taking place near the edge of the Bermuda platform. With the advent of GPS navigation, boaters no longer need to use landmarks to know their location when on the water, and closed areas can therefore be defined more precisely.

In 2005, following the discovery of an additional spawning aggregation, the two seasonal closures off the eastern end of the island were consolidated into a single 36.9 km² area along the edge of the platform – now called the northwestern SPA. This opened up more than 20 km² closer to shore for fishing. Following the success of this measure, the southwestern SPA was redesigned in 2013. Spawning aggregations near the platform edge are protected within 49.6 km² that remain closed to fishing for the reproductive season, while fishing is now allowed in approximately 60 km² closer to shore that was previously closed to fishing only because it was within the angle of the compass bearings used to define the protected area. Another change was that fishing is no longer prohibited in the popular area known as “Sally Tucker’s”. The 200m depth contour remains as the seaward boundary of these areas, and trolling is still permitted along this edge.

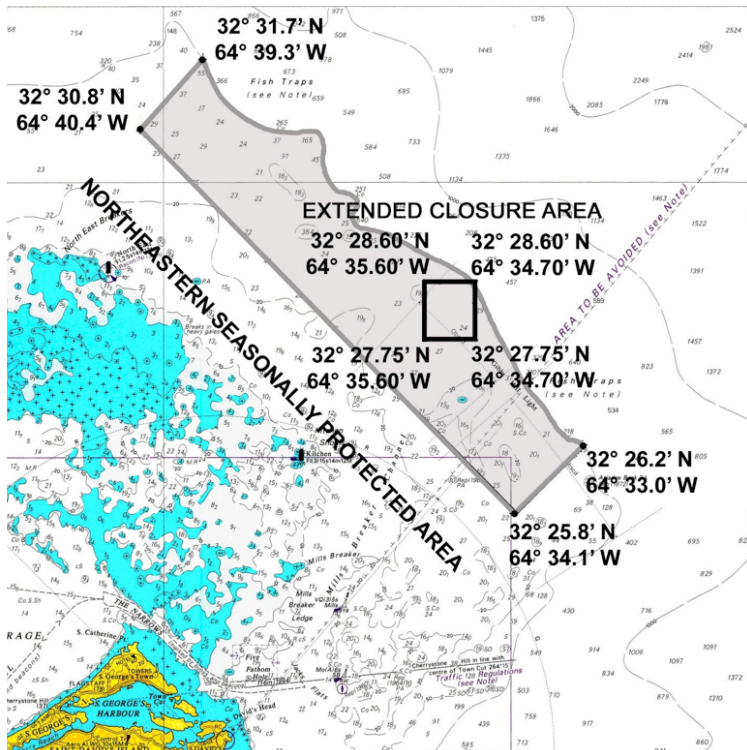
Historically, fishing was prohibited in the “Hind Grounds” from the beginning of May through the end of August, as the main spawning months for Red hind were June and July, with some reproductive activity also occurring in May and August. However, in recent years, there appears to have been a shift in when the Red hind aggregations first form for the season, and large catches of Red hind were taken from the “Hind Grounds” during April in both 2014 and 2016. With changes to the global climate, increased water temperatures, particularly during the months of February and March, may stimulate Red hind to spawn earlier in some years.

In 2017, in consultation with stakeholders, it was agreed that the Red hind aggregation sites needed greater protection and it was decided to move the closure period for the SPAs forward by two weeks. Fishing is now prohibited in the northwestern and southwestern SPAs from April 15th through August 14th, inclusive, each year. Within each of these areas there is an extended closure box that aims to protect Black groupers, which have a much longer spawning season, and these two boxes are closed to fishing through the end of November. The exact boundaries of these SPAs are shown in the accompanying maps, which also include the GPS co-ordinates for the corners of each area and for the corners of the extended closure boxes.

Recreational fishers are reminded that the bag limit of ten (10) Red Hind per boat per day that used to apply during the summer months is now in force throughout the year. There are also bag limits in place for Red hind for the commercial fishery from April through August. In addition, there is a bag limit of one (1) Black Grouper per boat per day year round for all fishermen.

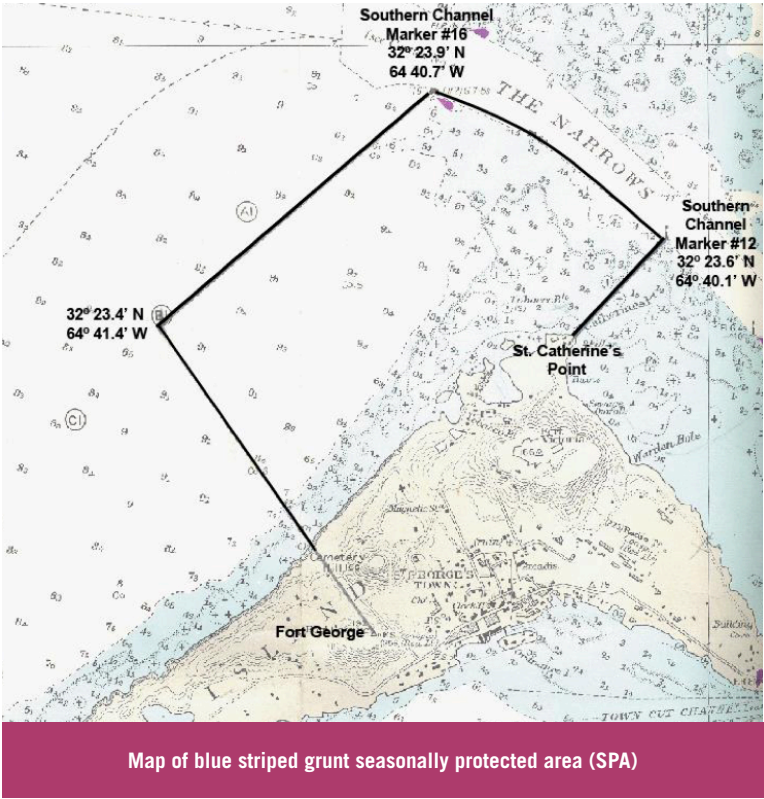


Map of the Southwestern Seasonally Protected Area and the Extended Closure Area for Black Grouper



Map of the Northeastern Seasonally Protected Area and the Extended Closure Area for Black Grouper

Members of the public may be less familiar with the aggregation area for Blue striped grunts, also known as bull grunts, near Fort St. Catherine. An area of 1.7 km², which extends from St. Catherine’s point to the navigation channel on the eastern end, and around to a marker buoy in line with the Bermuda Radio tower on the western end, has been closed to fishing for the months of May and June each year since 2007. This area is shown in the following map, along with GPS co-ordinates for the seaward corners.



The Department of Environment and Natural Resources urges the public to familiarize themselves with these areas and abide by the Fisheries Regulations in order to help conserve our local fish stocks.

Dr. Joanna Pitt, Marine Resources Officer

WHALE DISENTANGLEMENT WORKSHOP FEBRUARY 11-13TH, 2019

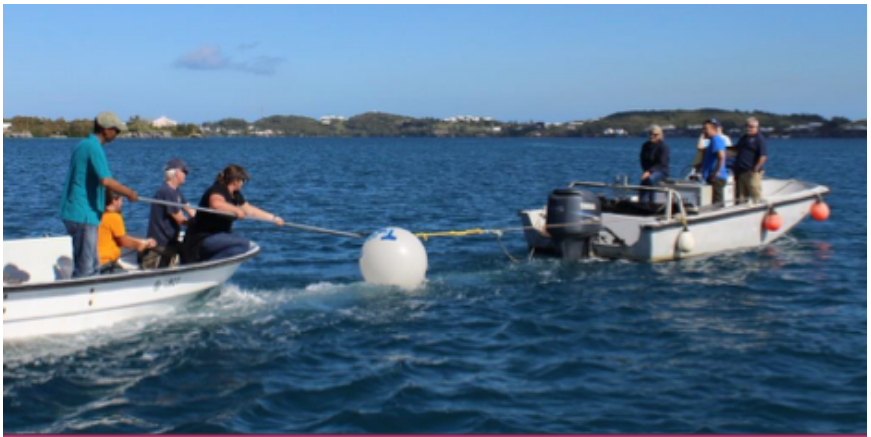
DENR hosted a three day workshop on whale disentanglement in February. This workshop was designed to give its 22 participants some information and a little hands-on training for disentangling. Reports of entangled whales in Bermuda are not common but also not unheard of. We have whales pass by our waters every year on their way to their feeding grounds in the North Atlantic. Whales will sometimes get themselves entangled in fishing gear and either get stuck or drag the gear behind them. Fishing gear may have rope that is several fathoms long. In Bermuda we are more likely to see large whales dragging or towing fishing gear with them, if we see them at all. In these cases it is very dangerous to boats since, often times, you can see the whale but may not realize they are dragging something behind them. Dealing with an entangled whale can be quite dangerous. A large 30 ton animal, tired, anxious and unpredictable. You have to approach slowly and quietly and you may only have a one shot to try to release the whale.

DENR offered this workshop to the department and extended invites to community partners that have helped with cetacean strandings in the past such as Dolphin Quest, Blue Water Divers, and Fantasea also joined the workshop as they may be key in helping us spot the whales that are in trouble.

The Speaker was Wayne Ledwell co-director of Tangly Whale Inc. with his wife Julie Huntington. He was trained under the leadership of Dr. Jon Lien during the heavy years of the large whale entrapments in the 1980s in the entrapment assistance program for fisherman in Newfoundland and Labrador, Canada. Wayne has been involved with whale strandings and disentanglements for over 30 years. In 2001 he and his wife formed Tangly Whales, Inc (known as Whale Release and Strandings Group) on request from Fisheries and Oceans Canada. He is a member of the International Whaling Commission's Expert Advisory Council on Entanglement Response and the "Global Whale Entanglement Response Network" (GWERN). He is a published author in scientific journals and of a field guide book "Whales and Dolphins of Newfoundland and Labrador". He is currently working on the 40 year history of releasing whales throughout the region.



Wayne Ledwell speaking to workshop participants (Photo: Michelle Smith)



Whale disentanglement workshop (Photo: Roma Hayward)



Whale disentanglement workshop participants
(Photo: Michelle Smith)

The workshop provided an opportunity for the sections within the department to work together and discuss possibilities regarding potential whale entanglement scenarios. Going forward, we will be looking at putting together a whale disentanglement kit so that we are prepared for the next entanglement that is reported in our waters.

Roma Hayward, Animal Care and Quarantine Officer

BIOSECURITY WORKSHOP

During the last week of February the Department hosted a visit by Gillian Key, the Overseas Territories Project Manager for the Great Britain Non-native Species Secretariat (GBNNS). The GBNNS is running a four-year project on biosecurity in the Overseas Territories (project website: <http://www.nonnativespecies.org/index.cfm?pageid=619>).

While in Bermuda, Gillian met with representatives from the Plant Protection, Animal Management, Agriculture and Biodiversity Sections of the DENR, along with representatives from HM Customs, BEST shipping and Cedar Aviation. Workshops were held on contingency planning, identifying potential new invasive species that might arrive



Biosecurity workshop participants on the Hamilton docks
(Photo: Alison Copeland)

on our shores, and pinpointing the pathways along which they might arrive. Workshop participants undertook field visits to the airport freight shed, the Hamilton docks and the warehouses of BEST shipping to gain a better understanding of the ways animals or plants could arrive in Bermuda, and the procedures already in place.

*Alison Copeland,
Biodiversity Officer*

The Whale Spring Migration is Starting Already!

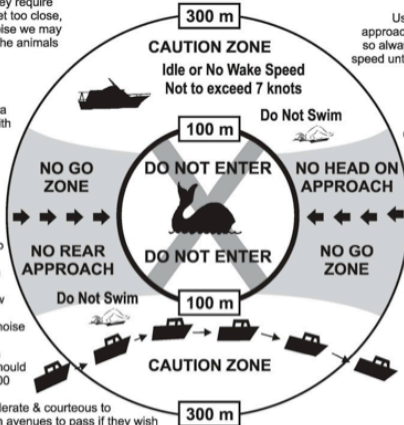
To ensure you & the Whales both have a once in a lifetime experience follow these basic Safety Guidelines

Whale watching can be a thrilling experience but the Boating Public must be aware that our presence can seriously affect the whales.

Just like us, Whales are mammals & they require space to feed, rest & socialize. If we get too close, approach too fast or make too much noise we may be disrupting their activities & causing the animals unnecessary stress.

What to do? Or what NOT to! Its just common sense!

- When sighting a whale, slow down to a constant no wake speed & proceed with caution, quietly & paying attention to ocean current & wind conditions
- The Caution Zone is 300 metres, do NOT approach any closer to the whales than 100 metres
- Do NOT approach from the front or behind the whales
- Approach & depart from the side, moving slowly in a parallel direction to that of the whales
- Avoid making excess noise or sudden movement, if you stop to observe the whales put your boat in neutral & allow your engine to idle for a few minutes before turning it off, avoiding sudden noise
- NEVER chase the whales
- Do NOT feed or swim with the whales
- Prevent crowding the whales, there should not be more than 3 boats within the 300 metre zone
- Do NOT crowd other boats! Be considerate & courteous to other viewers & allow the whales open avenues to pass if they wish
- Should the whales approach you, remain quiet, Do NOT touch them & avoid any sudden movements they may find alarming



When leaving the Whales

Use the same caution you employed in your approach. Whales are very large & unpredictable so always be calm, quiet & move off at a no wake speed until well clear of the 300 metre caution zone

Be a Responsible Boater!

Did you know...

It is illegal to harm any marine mammal under the Fisheries (Protected Species) Order of 1978 & also an offense to disturb or harass Humpback or Sperm Whales under the Protected Species Act 2003

If you see a boat or persons harassing the whales, contact the Fisheries Warden at 535 4615

Should you come across an injured or dead whale contact BAMZ at 293 2727



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Image © Roland Linae

Lobster Statistics Reminder

Recreational lobster divers are reminded that their catch statistics for the 2018-19 season must be submitted online (using the portal at www.fisheries.gov.bm) by the end of April. There should be an entry for each date / location that you fished, and a "No fishing" entry for any month in which you did not fish. Anyone failing to submit catch statistics for the season will not be issued a recreational lobster diver licence for the upcoming 2019-20 lobster season. Please call 2935600 or email fisheries@gov.bm if you are having difficulties accessing the portal.

Spearfishing Reminder

Recreational spear fishers are reminded that spearfishing statistics should be submitted monthly using the online portal at www.fisheries.gov.bm. Please call 2935600 or email fisheries@gov.bm if you are having difficulties accessing the portal.

March 2019

Thursday March 21st: World Forestry Day.

World Forestry Day promotes awareness of the value of forests across the globe by providing information on the protection, production and recreation of forests.

http://www.fao.org/docrep/f3730e/f3730e0c.htm#world_forestry_day

Friday March 22nd: World Water Day.

The UN General Assembly declared March 22nd World Day for Water to promote awareness of rapidly depleting water sources and the links between clean water, social well-being and economic productivity.

<http://submission.worldwaterweek.org/2014/event/7156>

Saturday March 30th: Earth Hour

Turn your lights off for 1 hour beginning at 8:30 pm.

<https://www.earthhour.org>

April 2019

Monday April 22nd: Earth Day

The theme for Earth Day 2019 is 'Protect Our Species'.

(<https://www.earthday.org/campaigns/endangered-species/earthday2019/>).

May 2019

Wednesday May 22nd: International Day for Biodiversity

The UN General Assembly has proclaimed May 22nd, the date of adoption of the Convention on Biological Diversity, as the International Day for Biological Diversity. The theme for 2019 is 'Our Biodiversity, Our Food, Our Health'.

<https://www.cbd.int/idb/2019/>

June 2019

Wednesday June 5th: World Environment Day

June 5th, marks the opening of the UN Conference on the Human Environment (Stockholm 1972) which led to the establishment of the United Nations Environment Programme (UNEP).

<http://worldenvironmentday.global/>

Saturday June 8th: World Oceans Day

Has been unofficially celebrated every 8 June since the Earth Summit in Brazil in 1992. It was officially recognized by the United Nations in 2008. The theme for 2019 is 'Together we can protect and restore our ocean'.

<http://www.worldoceansday.org/>

PLANTING CALENDAR – WHAT TO PLANT IN THE SPRING...

VEGETABLES

March

Beans, Beets, Broccoli, Cabbage, Carrots, Cassava, Cauliflower, Chard, Christophine, Collards, Corn, Cucumber, Eggplant, Kale, Leeks, Lettuce, Muskmelon (Cantaloupe), Mustard Greens, Okra, Pepper, Potatoes, Pumpkin, Radish, Rutabaga, Squash, Sweet Potato, Spinach, Tomato, Turnip, Watermelon

April

Beans, Beets, Broccoli, Cabbage, Carrots, Cauliflower, Chard, Christophine, Collards, Corn, Cucumber, Eggplant, Kale, Muskmelon (Cantaloupe), Okra, Pepper, Pumpkin, Radish, Rutabaga, Spinach, Squash, Sweet Potato, Tomato, Turnip, Watermelon

May

Beans, Cucumber, Okra, Pumpkin, Radish, Squash, Sweet Potato, Tomato

FLOWERS

March/April

Acrolinium, ageratum, alyssum, antirrhinum, aster, aubrietia, baby blue eyes, bachelor's buttons, bird's eyes, blanket flower, begonia, bells of Ireland, calendula, candytuft, carnation, centaurea, chrysanthemum, cineraria, coreopsis, dahlia, African daisy, dianthus, forget-me-not, geranium, gerbera, globe amaranth, globe gilia, godeita, gypsophila, hollyhock, impatiens, larkspur, lathyrus, marigold (African), marigold (French), nasturtium, nicotiana, pansy, petunia, phlox, phlox (annual), red tassel flower, rose everlasting, rudbeckia, salipiglossis, salvia, scabiosa, statice, snow-on-the-mountain, spider flower (cleome), star-of-the-veldt, stock, sweet pea, sweet William, verbena and viola.

May

Amaranthus, balsam, calendula, celosia, coreopsis, cosmos, gaillardia, gazania, globe amaranth, hollyhock, marigold, portulaca, rudbeckia, vinca and zinnia.

ON HER MAJESTY'S SERVICE



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