Dear Supporters:

Another successful year for the Osoyoos Desert Society is drawing to a close and the holiday season is once more upon us. This is a good time to highlight some of our activities during the past year as well as our plans for things to come.

In 2012, we decided that we needed to begin planning for a new interpretive building at the Desert Centre to replace the aging trailers. While the funding for a new building will require a great deal of work and good fortune, it also requires a good plan. It won’t just happen because we want it to happen! To this end, a good deal of time and effort was devoted to developing a workable fundraising plan which we hope to launch early in 2014. We hope you can help us with that. We also found a designer who is working with the Board of Directors on what a new Interpretive Centre might look like and what features it might contain. We hope to be able to share some preliminary ideas and sketches with members in the not-too-distant future so we can start generating the excitement that such a project requires for success.

In the meantime, we continue to maintain and improve our facility at the Desert Centre. Renovations on the boardwalk and kiosks are underway to make sure our Desert Centre investment remains safe and secure. In addition, new interpretive signs are being developed to enhance the visitor’s experience.

Our educational programs remain a priority. If last year’s Winter Program Series is an example, the more than 250 people who attended are a good indicator of the interest in our programs. In the coming year, we also want to focus our restoration efforts and look for ways to support more research activities relating to the antelope-brush ecosystem. To this end, the Board would like to establish a new Science Committee and is looking for interested members to take part in this initiative.

Finally, our annual membership drive is underway. While membership dollars are important, the number of members is even more important because it is a very tangible way of demonstrating public support for what the Osoyoos Desert Society stands for and strives to accomplish. We hope you will support the Society by becoming a member or renewing your membership. If you can assist us in any other way and would like to be more involved in our endeavours going forward, please let us know.

All the best over the holiday season and in the exciting new year to come!

Regards,
Mat Hassen
President, Osoyoos Desert Society
"A black widow saved my life." Although these words may not have been uttered in the past, it may surprise you that you could be hearing them in the near future.

We often think of black widow spiders as deadly—especially when we hear about their venom being more potent than that of a rattlesnake. However, there is not too much to worry about when it comes to black widows. These spiders are very shy and would rather save their venom for a potential meal. Bites that do occur usually happen in self-defense and people seldom suffer serious side effects.

So how could a venomous spider save a life? The black widow spider’s venom contains latrotoxin, a protein that affects the nervous system. One of the peptides—a building block of proteins—found within the toxin has been identified as having the potential to help treat Alzheimer’s disease.

Arachnid venom has long been researched as a potential cure for many diseases. It’s been found that very low solutions of some venom could slow the spread of lung cancer cells. Chlorotoxin, from scorpion venom, is used to treat brain cancer. Research is also being carried out on several species of spiders for advances in pain medication, prevention of heart fibrillations, treatments in breast cancer, nervous system disorders and much more.

As well as advances in medicine, the black widow has another life-saving secret hidden in its silk. The spider’s silk is related to collagen, like our skin and bones. Pound for pound it is stronger than steel, tougher than Kevlar, twice as elastic as nylon and still less dense than cotton. Since this naturally-occurring substance can outperform its man-made counterparts, chemists are studying its molecular structure in an effort to understand and reproduce the strands. Applications for this material could be endless, ranging widely from bulletproof vests and car air bags to human jaw repairs and artificial tendons.

Given the spider’s small size, getting enough silk to create any item could prove difficult. Randy Lewis, a professor of molecular biology at the University of Wyoming, developed a way to put the silk-spinning genes into goats. Yes, goats. This allows researchers to harvest the milk and purify the spider silk protein into higher quantities. (Unlike Spiderman, no other super powers were developed in the goats!) Scientists are looking to try a similar method but instead put the web genes into alfalfa plants, which could have the potential of producing even larger quantities of silk.

It seems that not all the bugs may be worked out yet, but don’t be surprised if one day you hear the words “a black widow spider saved my life.”
Big Sagebrush is a hallmark of the Okanagan landscape, but did you know its habitat is dwindling? Historically, Big Sagebrush occupied 62 million hectares of land in North America. In recent years it has been suggested that only 56% of its original distribution remains. Big Sagebrush provides food and shelter for hundreds of species. Unfortunately, human disturbance, environmental pressures and competition from invasive species are threatening wild populations.

In the fall of 2011 and 2013 University of British Columbia researchers Christina Turi and Susan Murch visited the Osoyoos Desert Centre to collect seed and shoot material from wild populations of Big Sagebrush (photo). We germinated the seeds after incubating them at 4 degrees C for about six months in the dark to simulate a winter season. The seeds were germinated in a sterile, controlled environment so that we can study the species without interferences of microbes, insects or contaminants. We grew small plants in plastic boxes containing a nutrient solution, sugar, vitamins and plant growth regulators to provide a year-round source of plant material for studies. Our research group can now grow Big Sagebrush and other close relatives in a laboratory setting. We are also able to produce hundreds or even thousands of Big Sagebrush plants to restore wild populations or for sustainable urban horticultural plantings in dry climates.

Big Sagebrush also has a long history of use by First Nations living in the Okanagan for medicinal and ceremonial practices1. Bioassays of the activity of Big Sagebrush have shown that the plants have antimicrobial and insecticidal activity. A review of the literature on Big Sagebrush found that 220 chemicals have been described in the leaf material and extracts2. Our studies on the chemistry and biological activity of Big Sagebrush are focused on neurological and insecticidal activity and will be available in 2014.


EVENTS

2014 Winter Program Series
Hosted by the Osoyoos Desert Society
Sponsored by Watermark Beach Resort

SNOWY OWLS – Movie & An Expert
Date TBA ~ 2-4 pm ~ Watermark Beach Resort
Journey deep into snowy owl tundra to observe the daily struggles involved in raising a family of owlets in the documentary ‘Magic of the Snowy Owl.’ Following the film Lauren Meads, Executive Manager of the South Okanagan Rehabilitation Centre for Owls, will discuss rehabilitation of snowy owls and other owl species in the Okanagan.

Movie & An Expert
Date TBA ~ 2-4 pm ~ Watermark Beach Resort
Join us for a program spotlighting one of British Columbia’s wildlife species.
Details to be announced!

BEES – Movie & An Expert
Date TBA ~ 2-4 pm ~ Watermark Beach Resort
View an award-winning documentary film and get a close-up look at the fascinating world of bees. Discover the challenges bees face, including the colony collapse disorder decimating bee hives around the world. Following the film, learn more about local bee diversity in the South Okanagan.

CHASING ICE – Movie & Annual General Meeting
Date TBA ~ 2-4 pm ~ Watermark Beach Resort
Follow National Geographic photographer James Balog across the Arctic as he deploys time-lapse cameras to capture a multi-year record of the world’s melting glaciers and the impact of climate change. After the film, attend the Desert Society’s annual general meeting for an update on activities over the past year and upcoming plans.

For more information contact the Osoyoos Desert Society
250-495-2470 ~ mail@desert.org
The BC Parks restoration project at Haynes Point has generated a great deal of public interest. Sara Bunge with BC Parks was contacted to share an update on the project.

HAYNES POINT RESTORATION UPDATE
by Sara Bunge
Acting Area Supervisor, BC Parks

The native ecosystems of Haynes Point Provincial Park are under threat from non-native and invasive species. BC Parks, with assistance from local volunteers, has initiated a restoration project at Haynes Point. This is a multi-year project that aims at shifting the vegetation trajectory (particularly in the western end of the Park) towards more native species. This is accomplished by removing non-natives such as Russian olive, tree of heaven, and Siberian elm, and replacing them with native species like antelope-brush, cottonwood, willow and red-osier dogwood. The estimated duration of the project is 10 to 15 years.

The fall of 2012 saw the removal of most of the Siberian elms from the amphitheatre knoll and planting of approximately 120 antelope-brush with the help of volunteers. These plants were watered throughout the summer and survival rate appears to be almost 50%, which is substantially higher than many other restoration projects involving antelope-brush. We will continue to monitor the antelope-brush.

In early October of 2013, a number of BC Parks staff removed a few more elms from the knoll, as well as a number of Russian olives from the south end of the wetland boardwalk. The limbs were chipped and disposed of offsite. The total amount of material removed was 14 cubic metres of chips! Russian knapweed, baby’s breath, tree of heaven and wild 4 o’clock were also treated in the Park.

Mid-October a number of volunteers joined Parks staff to plant 550 plants on the amphitheatre knoll, the wetland trail and along the spit. All the plants were watered once they were in the ground. Some of the species more susceptible to potential beaver impacts were caged off for protection. It was a great effort by everyone, with special thanks to our volunteers: Carol Boan, Dan Neiman, Skip King, Kathryn McCourt, Eva Durance and Margaretha Hogeling.

If you are interested in volunteering next year for aspects of the project (watering, weeding or planting), please contact Kirk Safford at kirk.safford@gov.bc.ca or 250-490-8252. More information about the project will soon be available on the BC Parks Haynes Point website at http://www.env.gov.bc.ca/bcparks.
As 2013 draws to a close, the Osoyoos Desert Society would like to acknowledge and thank all the government agencies, foundations, businesses and individuals who generously supported us throughout the past year. Your support makes our projects and programs possible.

THANK YOU TO OUR FUNDERS —

- Fortis BC
- Gaming Branch, Ministry of Housing & Social Development
- Osoyoos Golf Club
- RBC Blue Water Project
- Real Estate Foundation of BC
- Regional District Okanagan-Similkameen, Area A
- TD Friends of the Environment
- Suncor Energy Foundation
- Town Of Osoyoos

Free guided tours at the Desert Centre for local school students funded by Fortis BC.

Native cover crop seed mix study funded by the Real Estate Foundation of BC.

Wildlife camera monitoring project funded by TD Friends of the Environment.

Other 2013 projects and programs:
- Water conservation project funded by the RBC Blue Water Project,
- Habitat restoration work in partnership with the Osoyoos Golf Club, and
- Education programs funded by the Town of Osoyoos, the Regional District and BC Gaming.

For more information about Osoyoos Desert Society projects, visit the Desert Society website at www.desert.org and click on ‘What We Do.’
THANKS TO OUR ‘ROMANCING THE DESERT’ SUPPORTERS —

A big thanks to all our ‘Romancing the Desert’ supporters. The Desert Society’s annual fundraiser would not be possible without the generosity of the participating restaurants and wineries, and the many local businesses and individuals who contribute to the event. Thanks to you, this year’s ‘Romancing’ raised nearly $9,000 to help support our conservation efforts!

THANKS TO OUR DONORS —

Our sincere appreciation to all the individuals who gave donations to the Society throughout the year, as well as the businesses who kindly donated services and products to support our programs and projects.

THANKS TO THE SPONSORS AND DONORS who supported ‘Romancing the Desert,’ our guests enjoyed a fabulous evening of wine and food in a one-of-a-kind desert setting. Photo by Lisa Young.

AND SPECIAL THANKS TO OUR DEDICATED VOLUNTEERS AND MEMBERS —

As always, a very special thanks to our volunteers and members. Your support makes it possible for the Osoyoos Desert Society to exist and pursue its mission of habitat conservation, restoration and education.

Your support makes a difference.

Memberships and donations make the Society’s projects and programs possible.

To support our efforts, complete and mail the form in this newsletter or visit www.desert.org to donate online.

Thank you!

Thanks to donations from local businesses, the Desert Society is able to maintain a Native Plant Demonstration Garden to educate the public about the benefits of native landscaping.
MEMBERSHIP & MORE!

HOLIDAY GIFTS

Looking for a unique holiday gift? The Desert Society has a great selection of items perfect for holiday gift giving, including:

- Souvenir pins and t-shirts
- Bead Trail bracelets and charms
- Nature books and field guides
- Plush animal puppets and colouring books

Society memberships and Adopt-a-Species gifts are also available.

Adopt a Species—$25 per adoption

By symbolically adopting a local species, you’re giving an extraordinary gift while supporting the Osoyoos Desert Society’s conservation, restoration and education efforts. A finger puppet plush toy and personalized adoption certificate are included with each adoption.

To purchase a gift, please contact the Osoyoos Desert Society at 250-495-2470 or 1-877-899-0897 mail@desert.org

DESERT SOCIETY MEMBERSHIP/DONATION FORM

Name ___________________________________________
Address _______________________________________
Phone ___________________________ Email ____________

Membership ___ x $25 per person

Donation  □ $25  □ $50  □ $100  □ Other ______

Payment  □ Cheque  □ Visa  □ Mastercard

Credit card amount ________________________________
Credit card number ________________________________
Expiry date ________________________________
Signature ________________________________

☐ Please send me information on volunteering.

Please mail to: Osoyoos Desert Society, Box 123, Osoyoos, BC V0H 1V0