Ag Matters

Creating Buzz: Alberta Native Bee Council Hoping to Enlist Farmers in an Effort to Save and Nurture Declining Wild Bee Populations

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by Tim Kalinowski

Creating viable wild bee habitats on marginal agricultural lands should be a priority for farmers, says Megan Evans, president of Alberta Native Bee Council.

“The Agroforestry and Woodlot Extension Society of Alberta has done incredible work on this subject,” she says. “They work with producers to help give them guidance and support so they can create habitat for critters and other things that will give them these eco-system services for free. The eco-buffers would provide eco-system services such as trapping snowmelt and regulating runoff. It would provide habitat for things like spiders, birds and bees. Spiders and birds are going to eat pest insects and pollinators are going to pollinate your crops.

“You could also use that eco-buffer to produce additional food for your family by growing things like Saskatoon berries on it.

“These are little areas put aside in your agricultural land for this purpose,” she says. And it is actually not that hard to do, adds Evans. “Some of the habitat requirements for some of these bees are things like rotten logs and old pieces of wood they can excavate little tunnels out of or utilize existing beetle galleries,” she says. “And maybe put those things in an area where there is flowers nearby. Bees also need a diversity of flowers.

“They need flowers that are going to bloom all season long. They needs flowers that are different colours, shapes and sizes so that different types of bees can forage on them and get food from them.”

Other things you can do? Leave some sandy areas free of vegetation to create ground nesting habitats for Alberta’s smallest bees, which make up the majority of the 321 wild species currently chronicled in Alberta.

“Having access to areas with bare soil is really critical and important to provide that (nesting) ground they need,” she confirms. “What we need to do to help our bees is to incorporate diversity and complexity into our landscapes.”

Many of Alberta’s wild bee species are in decline, says Evans, and certainly part of that is lack of habitat for them. Another factor, she says, is competition with managed bees which, by the way, are not endangered in North America, she says.

Referring to honey bees and managed leafcutter bees, (both introduced species), Evans says somehow when the public thinks about declining bee populations they are the first thing which comes to mind when they are actually of least concern.

“They are livestock species, and they are not of any conservation concern,” she says. “That is one of the big pieces of information out there you hear a lot. ‘We need to help save the bees.’ And what people are thinking about is honey bees. That’s like saying, ‘We need to save the birds.’ And then only focusing on chickens.”

These managed species also have been known to spread disease to wild species; especially when native bumblebees are converted into managed greenhouse pollinators, she says.

“It’s really problematic because all these managed diseases can spread disease to wild bees,” she confirms, “and diseases spread from commercial greenhouse managed bumblebees to our wild populations are the leading cause of decline three of our listed (as endangered) bumblebee species we have in Alberta.”

But by far the biggest impact a farmer can have on the health of native bee populations is through judicious use of strategically applied pesticides, says Evans. She advises farmers to try to avoid using neonicitinoids, and only apply other

pesticides first thing in the morning or later in the evening when wild bees aren't active. She also advises farmers to avoid using sprays on flowers when are in bloom.

But, Evans reiterates, one easy thing a farmer can do right now to help ailing wild bee populations is create bee habitats on marginal lands that wouldn't need any spraying or industrial management. And part of that would be to seed in plant varieties in these that would bloom throughout the year.

"Some of bee species emerge when the crocuses are out and are active all summer long until September," she explains. "Whereas as some of these solitary bees like the sweat bee are only active for three weeks.

"So if they emerge and there is no food available, they are done. They can usually only travel about 300 metres in any direction also; so any time you can increase bee forage— it's a good thing."

Evans hopes by raising awareness of the possibilities of helping native bee species landowners and farmers will become more attuned to this valuable natural resource.

"These wild bee species are under-appreciated as pollinators because the focus has been on honey bees. "And I think once people start exploring the world of wild bees, and insects in general which is like this endless learning journey, it is addictive and interesting," she says.