

February 2014
Newsletter



PRAIRIE FALCON

Missouri Breaks Audubon Chapter Newsletter

Thursday

February 20th

**First United Methodist
Church**

Media Center

117 N. Central Ave

Board Meeting

6:30 pm

Regular Meeting

7:30 pm

Presenter:

Chris Hesla

"Conservation Legislation"

Bird of the Month

TBA

THIS MONTH:

Cold Weather Birds and Adaptations

After watching a mourning dove and some meadowlarks in between two of the recent cold snaps I started to wonder how they survived the weather.

There are two sorts of temperature-regulating mechanisms: physical and chemical. For every species of bird there is a range of temperatures, called thermoneutrality, where birds don't have to work to maintain body temperature. Temperatures above and below this range make birds work to either decrease or increase body temperature.

Feathers are the most obvious adaptation that allows for thermoregulation. The feathers can be fluffed to increase the layer of insulated air next to the birds body. Some species also contain a thick layer of insulating fat. The Emperor Penguin has a thick layer of down feathers as well as a 2 to 3 cm thick layer of subcutaneous fat. This allows the penguin to live in water that can be about 70°F colder than their body temperatures. The legs of birds also have cold and hot weather adaptations. The blood vessels in the legs have a countercurrent mechanism. The blood flowing in and out of the legs are in close proximity to one another and allows the exchange of heat. Pheasants exposed to air temperatures of 0°F had a body temperature of 105°F but their toes were 37°F.

Birds also produce heat chemically by converting food into energy. The more heat a bird generates the more it has to eat. Probably why I saw the dove at the feeders at Farm Island and the meadowlarks in a sunflower field. Some species are able to enter into a torpid state. One hummingbird studied reduced its heart rate from 480 beats per minute to 36 beats per minute when the temperature was dropped from 97°F to 59°F.

I failed to mention one of the most important cold/heat regulating mechanisms: migration. I am not sure why the aforementioned birds did not migrate. One theory I read said that maybe they are trying to be first to the top breeding areas. Hopefully, us and the birds survive the rest of the cold winter! Info from *The Life of Birds* by Welty and Baptista.

MISSOURI BREAKS
AUDUBON CHAPTER

National Audubon Society
Box 832, Pierre, SD 57501
Established 1978

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Big Year Record:

Neil Hayward from Cambridge, Mass. identified 750 birds during 2013. That is two more birds than Sandy Komito saw in his record year, 1998. Komito is a well know birder that was portrayed in the 2011 movie *The Big Year* by Owen Wilson.

Hayward's 750th bird was a Great Skua, which ironically was Sandy Komito's personalized license plate: SKUA. The boat's name that Hayward saw his 750th bird on was named...The Skua!

Link to the article:

<http://www.usatoday.com/story/news/nation/2014/01/02/birding-sport-big-year-citizen-science/4261529/>

Upcoming Events

- Great Back Yard Bird Count: February 14-17, 2014
- South Dakota Birding Festival @ Fort Randall: May 2-4, 2014
- SDOU Spring Meeting @ Lantern Motel, Milbank, SD: May 23-25, 2014

Be Green — Get this newsletter online

As a member of the National Audubon Society in Hughes and Stanley counties, you receive a copy of this newsletter as part of your membership. New mailing regulations require a different format and sticky tags to support machine readability at the post office. This adds to our handling time for paper copies of the newsletter.

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