

# Nature Notes

## Chickadee Winter Survival



Black capped and mountain chickadees both spend the winter in the Kimberley Nature Park. Have you ever wondered how these little birds survive our harsh winter weather?

Chickadees eat insects, berries, and seeds for much of the year, but have beaks well adapted to cracking oil and energy rich conifer seeds, their main winter food. They have even been seen eating energy rich fat from animal carcasses opened up by predators and scavengers. This explains their love of peanut butter and suet at feeders. This diet allows Chickadees to add body fat amounting to 10 percent of their weight each day and to use it all up each night to generate heat. Imagine if we gained and lost 5 to 10 kg. during daylight hours and lost it each night!

In times of plenty they cache food and are able to remember for up to 28 days both the location of the food and the energy content of the food. During cold winter months when higher energy foods are needed, the birds will return to the places where they cached the foods highest in energy.

During the breeding season they live as breeding pairs but in winter they are very social. This social behaviour apparently extends to communal nesting in logs or nest boxes in winter and this allows them to save energy. In extremely cold conditions they are able to lower their metabolic rate at night and thus decrease their body temperature by as much as 10 °C. They therefore lose less heat and this too conserves energy.

Any outdoors person knows that to avoid hypothermia, you need to stay dry. Chickadees, like all other birds, have a preen gland located near the base of the tail. They use their beaks to spread this oil over their feathers (the feet are used to reach the head) and this maintains water repellency. But how do they produce enough heat to stay warm in the winter? Chickadees

Repeatedly flex their pectoral muscles (shiver) to generate heat, which is then trapped by up to 2.5 cm of fluffed up feathers which are excellent insulators and which hide the fact they are shivering at your feeder.

The Chickadee survives our cold winters by adjusting its diet, behaviour, and metabolism. It is indeed an amazing little bird.



*Black-capped chickadee*

*(photo by Laura Erickson)*

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