



# Winter World: The Ingenuity of Animal Survival

By Bernd Heinrich



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From flying squirrels to grizzly bears, and from torpid turtles to insects with antifreeze, the animal kingdom relies on some staggering evolutionary innovations to survive winter. Unlike their human counterparts, who must alter the environment to accommodate physical limitations, animals are adaptable to an amazing range of conditions.

Examining everything from food sources in the extremely barren winter landscape to the chemical composition that allows certain creatures to survive, Heinrich's *Winter World* awakens the largely undiscovered mysteries by which nature sustains herself through winter's harsh, cruel exigencies.



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## Winter World: The Ingenuity of Animal Survival By Bernd Heinrich Bibliography

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## Editorial Review

From Scientific American

There cannot be many people who have gone into a beavers' lodge. Heinrich, professor of biology at the University of Vermont, did that in his quest to see how animals survive winter. It was a summer when the pond had dried up and the beavers were not in residence, but with a flashlight and room enough to turn around, Heinrich was able to conclude that the accommodation would be quite cozy for a beaver family in winter. Similarly trying to see for himself as much as possible, he describes the winter survival strategies of many animals. He marvels in particular at the success of the golden-crowned kinglet (*Regulus satrapa*), a bird "scarcely larger than a ruby-throated hummingbird" that remains active all through the winters of Maine and Alaska, its life "played out on the anvil of ice and under the hammer of deprivation." The kinglet, he says, symbolizes the "astounding and ingenious strategies that animals have evolved for coping in the winter world."

*Editors of Scientific American*

From [Booklist](#)

The ways animals cope during cold winter months are highlighted in this new title from Bernd Heinrich, the award-winning author of *Mind of the Raven* (1999), physiological ecologist, and professor at the University of Vermont. Some animals, such as voles, stay awake all winter in tunnels and grassy nests built under the snow. Other small mammals, such as chipmunks and ground squirrels, spend winter hibernating. Some insects supercool through chemicals in their blood that inhibit freezing, while others do the opposite and survive by promoting self-freezing. Many other animals remain active all winter and retire to warm nests or dens when not seeking food. Heinrich is a graceful writer, taking the reader along as he uncovers aggregations of wintering bugs, follows a weasel's tracks in the snow, or watches the tiny kinglets fluff their feathers for insulation as they search for wintering caterpillars. Liberally illustrated with the author's pencil drawings, this title will be sought out by fans of good nature writing. *Nancy Bent*  
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Review

"The stories are plain engrossing---in their elucidation, their breadth of examples, and their barely contained sense of awe and admiration." ---Kirkus

## Users Review

**From reader reviews:**

**James Peters:**

A lot of people always spent their own free time to vacation or even go to the outside with them friends and family or their friend. Were you aware? Many a lot of people spent that they free time just watching TV, or maybe playing video games all day long. If you would like try to find a new activity that's look different you can read some sort of book. It is really fun for you. If you enjoy the book you read you can spent the entire day to reading a guide. The book Winter World: The Ingenuity of Animal Survival it is rather good to read. There are a lot of those who recommended this book. We were holding enjoying reading this book. When you did not have enough space to create this book you can buy typically the e-book. You can m0ore simply to read this book through your smart phone. The price is not to cover but this book provides high quality.

**Melanie Pemberton:**

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