



## LAND OF ENCHANTMENT Wildlife Foundation

**Winter 2014**



Welcome, and thank you for taking the time to read Land of Enchantment Wildlife Foundation's (LEWF) first quarterly newsletter. Land of Enchantment Wildlife Foundation has had a big year! Since its founding on July 15, 2012, the board has made huge accomplishments in achieving our goals of assisting those who care for New Mexico's Wildlife.

One of our first projects was to assist the Santa Fe Raptor Center in building a new flight cage at Cottonwood Rehab's property. Pooling their resources, Cottonwood Rehab and the Santa Fe Raptor Center are now able to help more of New Mexico's avian friends. LEWF again partnered up with the Santa Fe Raptor Center to give an educational presentation to several students at the Los Alamos YMCA's iCare program. After the success of this presentation, LEWF is working with other organizations to continue to provide more educational opportunities in the future. Finally, LEWF has been working with smaller rehabilitation operations around the state to bring them into the digital age.

The next year continues to look exciting. Hopefully, we will soon be able to announce that we have received our nonprofit status so we can be more active in helping more rehabilitation operations throughout the state.

Please continue to check in with LEWF at [www.landofenchantment.org](http://www.landofenchantment.org), or on Facebook (<https://www.facebook.com/LandOfEnchantmentWildlifeFoundation>) for more updates on our activities, and activities of other rehabilitator's across the state. On the following pages, LEWF has worked with experts to compile some interesting information on what many animals do biologically when winter comes around. If there is a subject you would like more information on, please email us on Facebook or me personally at [jnrobinson88@gmail.com](mailto:jnrobinson88@gmail.com).

Again, thank you for taking your time to read our letter, and thank you for the care and concern you give for New Mexico's wildlife and those special people who take their spare time to care for these creatures.

Have a great winter, and lets keep hoping for snow!

Sincerely,

James Robinson  
Chair, Land of Enchantment Wildlife Foundation



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### HIBERNATION/TORPOR/DORMANCY/DIAPAUSE/ AESTIVATION/ BRUMATION

What are we talking about when these terms come up in a conversation?



**HIBERNATION** - is the physiological state where the body temperature drops to near ambient (environmental) temperature, and heart and respiration rates slow drastically. These animals recycle their proteins and urine, allowing them to stop urinating for months and they develop no muscle atrophy either. It is still very controversial as to whether the bear is a true hibernator. We know that the bat goes into a state of hibernation and cannot come out and then re-enter hibernation without causing death. Bears on the other hand can experience periodic arousals returning to high body temperature and then go back into the state of hibernation. Bears can also rear young during this state, where bats can only accomplish when they have returned to normal physiologic states.



**TORPOR** - is a state of decreased physiological activity in an animal, usually by a reduced body temperature and metabolic rate. This state allows animals to survive periods of reduced food availability. Daily torpor can be an important part of energy conservation at any time of the year. The Common Poorwill is the only bird known to go into torpor for extended periods (weeks to months).



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**DORMANCY** – Is a period when growth, development, and physical activity are temporarily stopped. Thus it helps organisms to conserve energy. It is closely tied with environmental conditions. Some animals can become dormant in the summer when there is not enough food and water for survival, but can come out when the environment returns to favorable conditions.

**DIAPAUSE** – is a mechanism used as a means to survive predictable, unfavorable environmental conditions such as temperatures extremes, drought or reduced food availability. Diapause is most often observed in arthropods but many embryos can enter this state and then later develop normally. The bear gets impregnated in June and the embryo stays in diapause until November when it starts to grow. Many fish embryos do go into diapause to survive winter and then begin to develop again.



**AESTAVATION** - is a response that is entered due to high temperatures and arid conditions. Invertebrates and vertebrates enter this state to avoid damage from high temperatures and to avoid desiccation. Both terrestrial and aquatic animals undergo this process.

**BRUMATION** – is used to indicate winter dormancy in ectothermic vertebrates that demonstrate physiological changes, which are independent of body temperature. Reptiles often wake up to drink water and then return to “sleep”

