



IS THAT SO!

Deep Sleep: Hibernation Near Death

By EUGENE BURNS

While we toast before warm fires during winter evenings, the warm-blooded animals of the outdoors have made marvelous adjustments to the stinging cold of winter and the scarcity of food. Many have migrated from mountaintops to valleys, others have gone to warmer climes where food is plentiful; some have undergone a bodily change, putting on heavier fur or feathers—sometimes of a protective color; others have insulated themselves with a layer of fat; countless more have entered into a big sleep.

The most unusual adaptation, perhaps, is the one we are at least aware of—the deep sleep. It varies with some it is a profound sleep, near death, for 7 months of the year during which time the heart-beat and breathing stop for minutes at a time and the body temperature drops to within a couple of degrees of freezing. And despite the added cold, most mammals eat less.

The intensity of this winter sleep is a highly individual matter—family has nothing to do with it, but the geographic location seems to.

In the north the groundhog hibernates below decks earlier than his kinsfolk of the deep south. In Quebec it may be the middle of September while in the south it may be late in December. In the high mountain tops of Idaho, the badger may hibernate by mid-October and not appear until mid-April; in lower elevations, say from 3,000 to 5,000 feet; he may disappear by January 1 and seldom reappear until mid-March; in the southwest, he may not hibernate at all.

Among the most profound sleepers are the ground squirrels (not the tree squirrels, close family relatives), some woodchucks, some bats, the prairie dogs, jumping mice, etc. With these, hibernation is almost a sleep of death.

Dig out a ground squirrel from its burrow and it will be as limp and inert as if its neck were broken. Respiration and heart beat are barely perceptible. It is cold to the touch—perhaps within a degree of freezing. It can



be shaken and dropped on a table without waking. How long is this sleep of near death? A female ground squirrel has been known to sleep for 33 weeks out of 52! Perhaps she out-classes all other mammals in this sleep marathon.

Some of the non-migratory northern bats and the dormouse (the prefix dor means sleep) are also deep sleepers. Although the bats tend to hang themselves up, upside down, in great clusters of hundreds and thousands, the little dormouse builds himself a neat little house of dry grass and then, once inside, seals the entrance so carefully that there is not the slightest hint of a joint or weakness. And then it sleeps soundly.

The skunk, raccoon, badger and opossum become torpid for several weeks but even so they often venture forth during mild periods. They are quite easily aroused. Along with it, their respiration, rate of heart beat and body temperature do not drop so drastically as do those of the true hibernator.

Even lighter winter sleepers are the squirrels and chipmunks. The chipmunk awakens quite often and gets something to eat and the red squirrel goes into winter seclusion only as a last resort, preferring to remain abroad all winter. Some tree squirrels, in fact, may be inactive for only a period of several days at a time.

Standing somewhere in the middle are the bears. In the far north, the female polar bear may go into seclusion under a mound of snow every two or three years when she gives birth to her young, but the male plods stolidly about. Farther south, the female black or brown bear tends to den up at the advent of sub-

freezing temperatures while the adult males are less likely to go to sleep and when they do, usually for a shorter period of time. The beginnings of hibernation are apparent in birds: nearly all eat about two-thirds less in winter than in summer—as do most mammals, and very many, like man's domesticated poultry, store up fat prior to winter's cold. They can go for a considerable time without food though they would die in half that time if they were left without food in the spring. Yet, despite this remarkable provision, many birds starve in winter.

One bird occasionally gets into

the hibernation act completely—the poorwill. A pair, studied recently, were found in a cliff. Their heart beat was so drastically reduced that it could not be detected; no moisture could be noted on a cold mirror placed in front of their nostrils; and a strong light beamed at the pupils brought no response, not even an attempt to close the eyelids—yet when spring came, they roused, and were fully alive. In poorwill, chicken, bear, squirrel—in every animal which must face the bite of winter and the scarcity of food, there is an implicit preparation which carries them through.

(Copyright, 1955, by Eugene Burns)

DR. JORDAN SAYS

Long-Continued Cough Shouldn't Be Neglected

By EDWIN P. JORDAN, M.D.

Any severe long-lasting cough, no matter what the cause, may result in a serious condition of the lungs known as bronchitis. An irritation of the breathing tubes such as a bronchitis, a severe asthma, or even a chronic sinus infection associated with coughing may bring about this condition.

In bronchitis the small pockets in the lungs known as alveoli (which are normally filled with air when a person breathes) are broken down, dilated and packed with mucus, fluid or pus. If you could see the involved areas of the lungs they would look much like a bunch of grapes.

Coughing by a person with bronchitis usually brings up a heavy mucus sputum, often having a foul odor. Accurate diagnosis, however, depends on special examinations, including an X-ray film. A remarkable instrument called a bronchoscope, by which the dilated pockets can be seen by the physician, may also be used.

Once bronchitis has developed the first step in treatment is to find out if the condition which produced the bronchitis is still active. If it is, appropriate treatment must be directed at

the active cause. Until recently treatment of bronchitis was unsatisfactory. Now, however, many good results have been reported from the use of penicillin given by injection or inhalation.

The other method of treatment which is satisfactory for many of those with bronchitis, especially when the condition is advanced, is surgery. The part of the lung affected with bronchitis can be removed by surgery pretty successfully and this has undoubtedly saved many lives. For those who are unfortunate enough to have developed an advanced type of bronchitis, surgery still offers good hope of restoring health and preventing untimely death.

A person who has a long continued cough, regardless of what is producing it, ought to try to get at the bottom of the trouble and stop the difficulty before bronchitis has had a chance to become established. Bronchitis interferes with health and the ability to work, and in its most serious form can even cause death. It is therefore extremely desirable to prevent it if at all possible.

Church Directory For Town and Country

By MARGARET BENSTON

BEACHLY MEMORIAL CHURCH (Non-D)—9:45 a.m., (S.S.); 11 a.m. CAMP CREEK COMMUNITY (Non-D)—Ph. 6-1938. 10 a.m. (S.S.); 11 a.m., 7:30 p.m. CORBURG CHURCH OF CHRIST—Ph. 5-7018. 9:45 a.m., (S.S.); 11 a.m., 7:30 p.m. FULL GOSPEL TABERNACLE—Ph. 4-7236. 9:45 a.m., (S.S.); 11 a.m., 7:30 p.m. METHODIST—Ph. 4-2979. 9:45 a.m., (S.S.); 11 a.m. COTTAGE GROVE ASSEMBLY OF GOD—B at 7th. Ph. 6-1291. 9:45 a.m., (S.S.); 11 a.m., 7:30 p.m. FIRST BAPTIST (5th & Jefferson)—Ph. 1014. 9:45 a.m., (S.S.); 11 a.m., 7:30 p.m. CALVARY BAPTIST—9:45 a.m. (S.S.); 11 a.m. CATHOLIC—Ph. 103-L. Usual Masses. CHRISTIAN SCIENCE—241 Second St. (S.S.) and church at 11 a.m. CHURCH OF CHRIST—Gibbs at 8th. Ph. 893-L. 9:45 a.m., (S.S.); 11 a.m., 7:30 p.m. CHURCH OF GOD—Adams at 7th. 9:45 a.m., (S.S.); 11 a.m. FREE METHODIST—915 South 6th. Ph. 609-L. 9:45 a.m., (S.S.); 11 a.m. METHODIST—334 Washington. Ph. 108. 9:45 a.m., (S.S.); 11 a.m. REORGANIZED LATTER DAY SAINTS—Eagles Hall, 711 Main. Ph. 261-J. 10 a.m., (S.S.); 11 a.m. PRESBYTERIAN—Ph. 928. 9:45 a.m., (S.S.); 11 a.m. ST. ANDREW'S EPISCOPAL—Main St. at M. Ph. 815-L. 9:45 a.m., (S.S.); 11 a.m. SEVENTH DAY ADVENTIST—Ph. Eugene 6-3795. 9:45 a.m., (S.S.); 11 a.m. TRINITY LUTHERAN—Quincy and 7th Sts. Ph. 1271. 9:45 a.m., (S.S.); 11 a.m. CHESWELL ASSEMBLY OF GOD—10 a.m., (S.S.); 11 a.m., 7:30 p.m. BEACON CHAPEL (Open Bible Standard)—10 a.m., (S.S.); 11 a.m., 7:30 p.m.	CHURCH OF CHRIST—9:45 a.m., (S.S.); 11 a.m. and 7 p.m. METHODIST—Ph. Creswell 336. 10 a.m., (S.S.); 11 a.m. PRESBYTERIAN—Ph. Creswell 297. 9:45 a.m., (S.S.); 11 a.m. DENTER BAPTIST—9:45 a.m., (S.S.); 11 a.m., 7:30 p.m. DRAIN CHRISTIAN SCIENCE—Music room, Drain Grade School. 11 a.m. ELMHURST CHURCH OF CHRIST—Ph. Veneta 2594. 9:45 a.m., (S.S.); 11 a.m. OPEN BIBLE STANDARD—Ph. Eugene 5-5564. 10 a.m., (S.S.); 11 a.m. FALL CREEK CHRISTIAN—Ph. Eugene 5-1711. 10 a.m., (S.S.); 11 a.m., 8 p.m. FINN ROCK UNION SUNDAY SCHOOL, Write Mrs. Alva White, Finn Rock, Ore. 10 a.m., (S.S.); 11 a.m. GOSHEN CHURCH OF CHRIST—9:45 a.m., (S.S.); 11 a.m., 7:30 p.m. FLORENCE ASSEMBLY OF GOD—10 a.m., (S.S.); 11 a.m., 7:45 p.m. CHRISTIAN SCIENCE—Gargnier and 5th. 9:45 a.m., (S.S.); 11 a.m. EVANGELICAL UNITED BRETHREN—5th & Adams. 9:45 a.m., (S.S.); 11 a.m., 7:30 p.m. FRANKLIN CHRISTIAN—Ph. 4-3101. 10 a.m., (S.S.); 11 a.m., 7:30 p.m. JUNCTION CITY ASSEMBLY OF GOD, 6th & Elm—9:45 a.m., (S.S.); 11 a.m., 7:30 p.m. BAPTIST, 18th & Juniper—9:45 a.m., (S.S.); 11 a.m., 7:30 p.m. CHRISTIAN, 5th & Juniper—9:45 a.m., (S.S.); 11 a.m., 7:30 p.m. CHURCH OF GOD, 12th & Laurel—10 a.m., (S.S.); 11 a.m., 7:30 p.m. LATTER DAY SAINTS—Greenwood Hall 10:30 a.m., (S.S.); 7:30 p.m. LUTHERAN, 6th & Nysa—9:45 a.m., (S.S.); 11 a.m. METHODIST, 16th & Laurel—9:45 a.m., (S.S.); 11 a.m. SEVENTH DAY ADVENTIST, 4th & Kalama—Ph. Eugene 3-0662. 9:30 a.m., (S.S.); 11 a.m.	IRVING CHURCH OF CHRIST—Ph. Eugene 4-8102. 10 a.m., (S.S.); 11 a.m. LAKE CREEK COMMUNITY CHURCH (Non-D)—10 a.m., (S.S.); 11 a.m. LEABURG PRESBYTERIAN—Ph. 7-7783. Church at 9:45 a.m., (S.S.); 11 a.m. LONDON CHURCH OF CHRIST—Ph. CG 1214. 21. 10 a.m., (S.S.); 10:50 a.m. LORANE CHURCH OF CHRIST—Ph. 324-M. 10 a.m., (S.S.); 11 a.m. LOWELL BIBLE STANDARD—Ph. Lowell 298. 9:45 a.m., (S.S.); 11 a.m. CHURCH OF CHRIST—Ph. 4-9078. 10 a.m., (S.S.); 11 a.m. CATHOLIC—U.S. Engineers Recreation Room in Lowell, Ph. Oakridge 2-0761. Mass 9:15 a.m.	VAUGHN CHURCH OF CHRIST—Ph. Eugene 4-7848. 9:45 a.m., (S.S.); 11 a.m., 7:30 p.m. VENETA GOSPEL MISSION—Ph. Veneta 2271. 10 a.m., (S.S.); 11 a.m. OLIVET BAPTIST—Ph. Eugene 4-0955. 10 a.m., (S.S.); 11 a.m. PENTECOSTAL CHURCH OF GOD—Ph. Veneta 2293. 9:45 a.m., (S.S.); 11 a.m. SEVENTH DAY ADVENTIST—Ph. Eugene 3-3062. 9:30 a.m., (S.S.); 11 a.m. WALTEVILLE COMMUNITY CHURCH (Non-D)—(S.S.); 10 a.m. Service at 7:30 p.m. PRESBYTERIAN—Ph. 7-7783. 10 a.m., (S.S.); 11:15 a.m. WESTVIR COMMUNITY UNDERDOMINATION—(Sponsored by the Willamette Presbytery of the Presbyterian Church). 9:45 a.m., (S.S.); 11 a.m. WESTVIR-OAKRIDGE ST. LUKE'S LUTHERAN—Ph. Oakridge 2-0831. 10 a.m., (S.S.); 11 a.m. NOTI CHURCH OF CHRIST—Ph. Veneta 2295. 10 a.m., (S.S.); 11 a.m. OAKRIDGE ASSEMBLY OF GOD—Ph. 2-1254. 9:45 a.m., (S.S.); 11 a.m. ST. MICHAEL'S CATHOLIC—Ph. 2-0761. 7:30, 11 a.m. OPEN BIBLE STANDARD—9:45 a.m., (S.S.); 11 a.m. BAPTIST—Ph. 2-1396. 9:45 a.m., (S.S.); 11 a.m. CHRISTIAN—Ph. 2-1255. 9:45 a.m., (S.S.); 10:55 a.m. CHURCH OF CHRIST—10 a.m., (S.S.); 11 a.m. CHURCH OF GOD—9:45 a.m., (S.S.); 11 a.m. METHODIST—Ph. 2-0172. 9:45 a.m., (S.S.); 11 a.m. CHURCH OF THE NAZARENE—Ph. 2-0232. 9:45 a.m., (S.S.); 11 a.m., 7:30 p.m. PLEASANT HILL CHRISTIAN—Ph. Eugene 3-9477. 10 a.m., (S.S.); 11 a.m., 6:30 p.m., 7:30 p.m. SPENCER CREEK LUTHERAN—Route 3, Eugene Ph. 4-9333. 9:45 a.m., (S.S.); 11 a.m.
---	--	---	--

