

dead. Several were examined when found, and about one third of these proved to be entirely congealed, the remainder being flexible and showing signs of life when enclosed in the hand for a short time. The temperature to which these had been exposed was several degrees below zero, and for a couple of weeks scarcely ever more than 16 degrees above. Such collections of this species are not uncommon. I gathered up the full of a half ounce collecting bottle, leaving fully as many behind. In the warmth of my office, in a couple of days, about one half of those collected became active, though none that I regarded as frozen ever gave evidence of the slightest vitality.

During the very cold weather of last winter I found five specimens of *Lixus concavus* embedded near one another in ice in a patch of *Rumex* on low ground. A couple taken out without thawing appeared to be dead; sections were made in these in different directions with a sharp knife without detecting any frozen tissue, or any frost in the cavities of the bodies. The others were allowed to thaw out gradually and then they were discovered to be alive. Their after history is somewhat curious.

The tenacity of life possessed by this species has often been the subject of remark, and appears, from the following, to be greatly intensified by the mysterious changes that accompany the condition of torpidity. These three were thrown into strong alcohol, and on the third day were taken out and pinned, the time they were in it being over sixty hours. Five days afterwards they were observed to be alive and wriggling, their limbs quite lively; then they were pinned to the inner end of the cork stopper of a bottle containing cyanide of potassium, and when examined four days afterwards appeared to be as lively as when first pinned. How long afterwards they lived is unknown, as a long interval occurred before the next observation, and then they were truly dead.

By the foregoing it must not be inferred that I maintain the freezing of the tissues of torpid Coleoptera to be incompatible with the resumption of the functions of life—an opinion that would be, to say the least, presumptuous in the face of the many opposite experiments and observations by distinguished men.

The subject is one full of mystery and deserves the most careful attention.