pupa give better results, and give monstrosities with two sets of wings.

The European hornet is shown by Dr. L. O. Howard to have existed near New York City for at least fifty years, yet it has spread less than 150 miles. In Europe the species usually inhabits outhouses, but in America the nests are almost invariably built in hollow trees.

So small a creature as the beaver, according to Mr. H. B. Woodward of the British Museum, has changed the character of a considerable portion of the British Isles to a remarkable degree. The borders of the fens were once covered with forest, and the beaver was one of the most plentiful animals of the region. Its dams turned the streams from their natural course. The water—as in the valleys of the Lea, the Ouse, the Cam, and the Nene—was thus made to flow over the country at random, the valleys gradually becoming stagnant areas filled with bog moss, and forming what we know as the fen lands.

A surgical operation upon a woman of 38 has resulted in a fistula-through which Dr. Franz Pfaff has been enabled to study the effects of drugs on the secretion of bile. The investigations correct a general delusion by showing that drugs have no influence. Calomel and corrosive sublimate did not affect the flow of bile, salol caused a very slight increase, and the only substance that produced any marked effect was the woman's own bile administered in pills. These pills increased the secretion more than a third in twenty-four hours, the quantity becoming less than before on ceasing to give the pills.

An effort has been made to determine the pulling strengths of elephants, horses and men. Attached to a dynamometer, Barnum and Bailey's largest elephant registered a pull of 2½ tons on the second trial, but a smaller and more active elephant gave a record of 5½ tons—whether as the result of a steady pull or a sudden jerk appears to be uncertain. A pair of powerful horses registered a ton and a fifth, while it required the strength of 83 men to equal the pull of the smaller elephant.

The sterilization of grape juice— a process having been devised by M. Rosenstell, a French chemist—is urged in Algeria as a means of creating a home market for the product of the vineyards. The religion of the Mohammedan does not forbid the use of unfermented grape juice, as it does that of ordinary wine, and temperance societies outside of Algeria would welcome a pleasing drink free from alcohol.

Wooden pavements in Paris have been condemned, as they serve as a breeding place for all kinds of dangerous germs.

A recent interesting discovery is that many lizards, in running rapidly, take an erect posture and use the hind legs only. This curious fact was first noticed by Mr. W. Saville-Kent, an Australian observer, in the Australian frilled lizard, and has been since seen by him in other Australian species. The structure of American lizards leads him to infer that many of them may run on two legs. Mr. Henry Prestoe, who has lived twenty years in the West Indies, confirms these conclusions, stating that every lizard he has seen running—from the large Iguana, which is five feet long and lives chiefly in trees, down to the smallest mite one sees occasionally about hte stones—moves on two legs when hurried. The Diamond lizard, common in Trinidad, often leaves on a muddy surface footprnts exactly like those of a fowl or bird.

The earthworm, glorified by Darwin, is now accused of playing a considerable part in the spread of disease. Pasteur found germs of charbon near the surface of soil in which sheep that had died from disease had been buried several years previously, and Dr. Halstead Boylan, of Paris, finds reason for believing that not only charbon but typhoid and yellow fevers and tetanus may be spread by germs brought to the surface from dead bodies by earthworms An epidemic of yellow fever in the Amazon valley, in 1850, seems to have resulted from the sol over the grave of a Jamacia man who had died from the fever and had been landed at Para for burial.

The production of what is known as silk-worm gut for fishing lines is a curious industry that has followed the decline of silk culture in the vicinity of Murcia, Spain. The grub is fed on the usual mulberry leaves, but before it begins to spin it is drowned in vinegar, and the substance that would have formed the cocoon is drawn from the body as a thick silken thread. The threads are treated with chemicals, dried, put up in bundles of 100, and sold along the Mediterranean.

By experiments on rabbits, Prof. Fischel has demonstrated that getting chilled has a most important effect in predisposing to disease.

RETURNED ELDERS

Elder Joseph Sessions of Bountiful, Davis county, returned Saturday from the Southern States mission field, for which locality he left this city Dec. 7, 1895. While away Elder Sessions labored in the middle Tennessee conference, where he reports the work progressing and the people very favorable towards the Elders and the principles which they advocate. Elder Sessions enjoyed his labors although he experienced some sickness while away.

Elder William Campbell of the First ward of this city has returned from a mission to Europe and was a caller on the "News" during the week. He left home April 5th, 1896, and labored in the Scottish conference, where the prospects are better and brighter than they have been for some time past.

Among the contingent of Elders who have recently returned from abroad is Elder D. E. Jones of Union, Salt Lake county, who left home March 21, 1896. He went to Great Britain and was set apart to labor in the Welsh conference. He returned home on the 12th inst.

Elder George C. Wood of South Bountiful is home from a mission to Great Britain, for which part of the world he departed on February 21, 1896. He labored in the Scottish conference, which he reports as being in a healthy and promising condition.

Elder George M. Leonard of Farmington is home again after a mission of nearly three years on the Samoa islands. He left home on May 27, 1895, and returned to Utah on Friday, the 11th inst. The outlook for effective missionary work in Samoa, he says, is very satisfactory.

THE COST OF A CONFLICT

"Until I know the number of men to be brought into service and the scope of preparation I would hesitate in making even a rough estimate of cost. It is like asking the length of a string. It depends. All I can say is that the cost of war is enormous—the greatest one item of cost known."

The foregoing words were spoken by General Joseph R. Hawley, United States senator from Connecticut, when asked to estimate the probable cost of a war between the United States and Spain. General Hawley was speaking solely upon the financial side of the question; his opinion was asked on this alone. The amount of treasure which would be eaten up in any kind of conflict with any nation was the object aimed at. The reply was possibly as accurate as could be made by any man. General Hawley not only had experience in the field as a soldier during the greatest war the world has ever known, but he has had years of study has become familiar with the problems which confront a government on the brink of armed conflict.

But conservative estimates of men expert in such matters fix the cost of beginning war on the part of the United States at $200,000,000. The same authorities estimate the cost of maintenance for six months at $300,000,000. Few persons are so inflated with the belief in the invincibility of these United States as to give voice to the opinion that a war with Spain would terminate in less than six months. On this computation of time and money, therefore, it would cost this government $500,000,000 to go to war and keep it up for the shortest time any one informed believes to be possible. This is merely the first cost and does not include the loss of life, the sorrow of thousands of homes and the resultant cost of pensions, etc., for the widows of the dead and for the maimed whose injuries would be the direct result of the war.

The authorities drawn upon for the foregoing estimates are men who are conversant with the requirements. They know the detailed cost of ordnance, commissary and quartermaster's stores, equipment and transportation. They know that all of these things have fixed prices, and given the number of men to be employed could figure the cost of beginning and maintenance down to cents. These same officers, heads of bureaus, etc., fix the cost to Spain at about the same figures. They declare that it would cost the don 1,000,000,000 pesetas to begin war and 1,500,000,000 to carry it on for six months. As a peseta is about 20 cents, it would be seen that

In his discussion of the subject General Hawley mentioned the experience of cost of war. Many other military authorities base their ideas on the practical experience which that conflict afforded the American people. It was a lesson not only in the assembling of men and supplies, but in the best methods to be followed in raising great sums of money for emergencies.

When President Lincoln called on Congress for 400,000 men he also asked for $400,000,000. This was at the rate of $1,000 for every man called into service. His message to Congress stated also that the sum asked was "less than one-twenty-third part of the money value owned by men who seemed ready to devote their whole." This gives another percentage—one-twenty-third—as a basis of calculating what amount of the wealth of a country should be summoned to aid in its defense.

Secretary Chase, then at the head of the treasury, estimated 320,000,000 as the sum required to begin the war. This proved to be short of the requirements. The army appropriation bill passed by the extra session of Congress after the firing on Sumter carried $207,000,000. The navy aprpopriation bill carried $56,000,000. These estimates and appropriations were made, it must be remembered, with no conception of what the war was to be, and with an idea that at most it would close within six months. The first estimates of war are usually under rather than over what the cost proves to be.