

**THE MILITARY RIDING SCHOOL AT TOR DI QUINTO.**

Signor Sbisà, of Rome, Italy, has taken a series of instantaneous photographs at Tor di Quinto during the obstacle exercises and down-hill riding practice of the military riding school at that place. If an artist painted a horse in one of the surprising positions shown

our own troopers recently at the Madison Square Garden, the methods of training cavalry in Italy will be viewed with interest.

**Growth of Diatoms.**

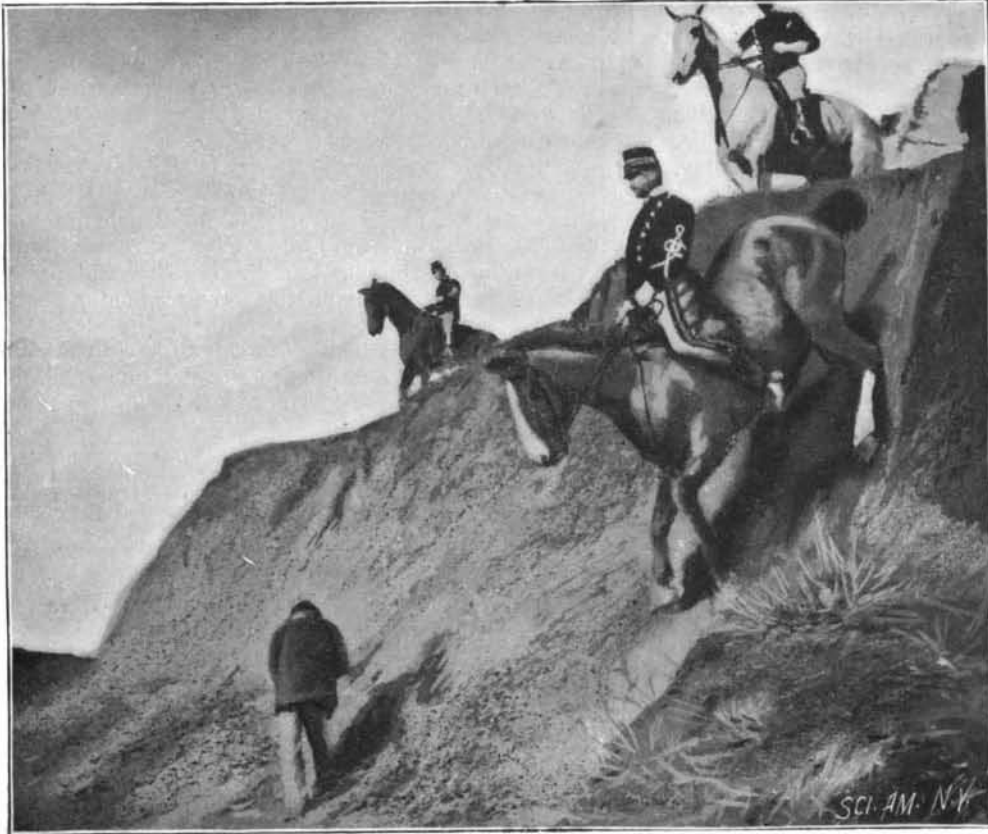
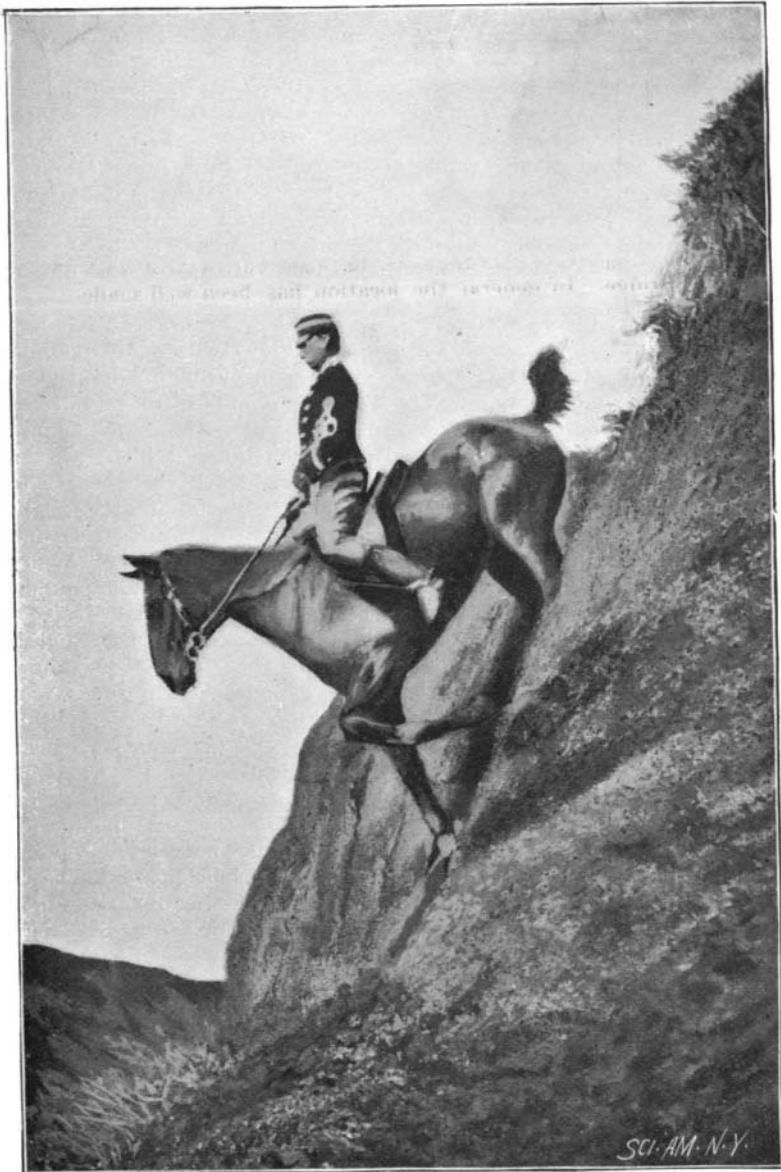
Mr. G. C. Whipple has carried on a series of experiments on the culture of different kinds of diatoms, and finds that an abundant food supply is not the only condition favorable for their rapid increase; the temperature, the amount of light and other factors, influencing their growth. In common with all other chlorophyllaceous plants, diatoms will not grow in the dark, while, on the other hand, bright sunlight also kills them. The intensity of the light below the surface of the water being affected by the color of the water, dia-

ence on the growth of diatoms; they increase most rapidly during those seasons of the year when the water is in circulation throughout the vertical. During these periods not only is food most abundant, but the vertical currents keep the diatoms near the surface, where there is light enough to stimulate their growth, and where there is abundance of air. Some species display strong heliotropism, moving toward the source of light.—Technology Quarterly (Boston).

**Can a Frozen Animal be Restored to Life?**

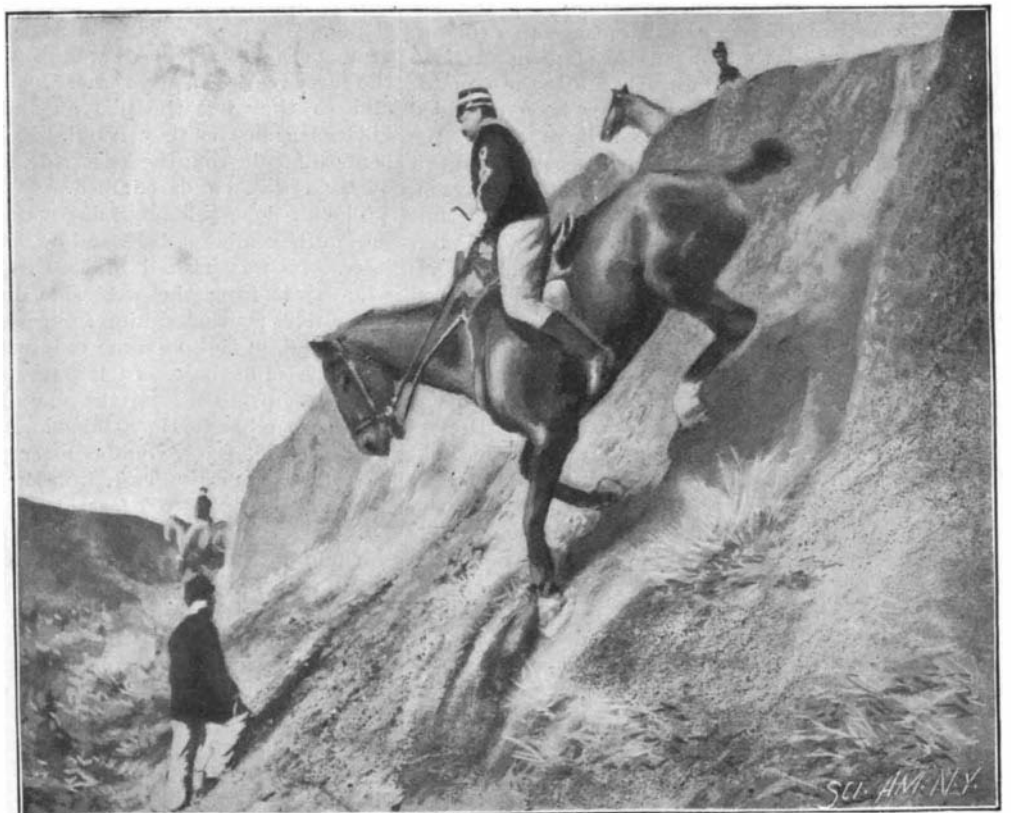
If the animal is slowly frozen and as slowly thawed out, life may be restored. If the freezing takes place at  $-5^{\circ}\text{C}$ ., the temperature then remaining at  $-2^{\circ}\text{C}$ ., there cannot be an aggravation of the condition. The temperature must be gradually raised, otherwise a fatal result will follow. The old plan, so prevalent in cold regions, of thawing out a frozen member of the body by rubbing with snow, before coming into a warm room, is based on scientific principles. Death follows at once if all the water contained in the body be crystallized. Complete congelation of the water of the body tissues signifies complete drying, separation of all the soluble and loosely chemically united gases, as well as crystallization of the salts. As a result of this, the structure of the protoplasm, as well as its chemical and physical characters, is necessarily destroyed. Death follows as the result of this separation of the living substance, and not as a consequence of great reduction of temperature. Water containing leeches can be lowered to  $-4.5^{\circ}\text{C}$  without the formation of ice within the tissues of these animals. Only when crystallization of the water surrounding the animals occurs, and extends into their richly watery tissues, do they die.

Animals whose tissues are rich in water may be frozen to stony hardness, but, as shown by macroscopic and microscopic examination, a sluggish, movable fluid may be seen coursing among the ice needles. Too long a time must not follow freezing before the efforts to restore life commence.—Medical and Surgical Reporter.

**NEGOTIATING A DEEP CUT.****AN ANXIOUS MOMENT.**

in the photographs, he would be severely criticised. This is because nowadays nature is not studied enough. The Greeks, however, who derived all their art from nature, have represented similar and other difficult positions of horses on vases of which wonderful specimens have been preserved. Some fine examples of equitation have been shown recently at Tor di Quinto. This beautiful suburb of Rome is universally known for its beautiful drives, but few know that it draws its name from the ruins of an antique tomb situated there. The painter Nicholas Poussin loved the scenery of the Campagna so much that he painted there many of his celebrated landscapes. For our engravings we are indebted to L'Illustrazione Italiana. In view of the very interesting exhibition of horsemanship shown by

toms are found most abundantly in light colored waters. Different genera, however, exhibit differences in this respect; Melosira does not require so much light as Synedra. The weather has a marked influ-

**A POINT TO POINT STEEPLECHASE.****NEARING THE BOTTOM.****MILITARY EQUESTRIAN EXERCISES IN ITALY.**