## **Demonstration Materials**

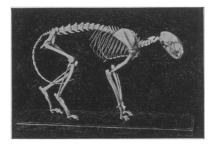
for

High School Work in Biology—Botany—Zoology Agriculture—Physiology

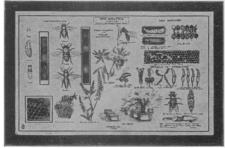
Turtox Products include a very complete line of demonstration preparations for use in teaching the Biological Sciences. Models, skeletons, life histories and display specimens are illustrated and described in the Turtox Catalogs.







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## The Future of Aviation

Octave Chanute, in an address before the American Association for the Advancement of Science, December 30, 1903 (thirteen days after the Wright Brothers' first successful airplane flight) and reprinted in the Annual Report of the Smithsonian Institution for 1903:

Now that an initial success has been achieved with a flying machine, we can discern some of the uses of such apparatus, and also some of its limitations. It doubtless will require some time and a good deal of experimenting, not devoid of danger, to develop the machine to practical utility. Its first application will probably be military. We can conceive how useful it might be in surveying a field of battle, or in patrolling mountains and jungles over which ordinary means of conveyance are difficult. In reaching otherwise inaccessible places, such as cliffs, in conveying messages, perhaps in carrying life lines to wrecked vessels, the flying machine may prove preferable to existing methods, and it may even carry mails in special cases, but the useful loads carried will be very small. The ma-chines will eventually be fast, they will be used in sport, but they are not to be thought of as commercial carriers. To say nothing of the danger, the sizes must remain small and the passengers few, because the weight will, for the same design, increase as the cube of the dimensions, while the supporting surfaces will only increase as the square. It is true that when higher speeds become safe it will require fewer square feet of surface to carry a man, and that dimensions will actually decrease, but this will not be enough to carry much greater extra-neous loads, such as a store of explosives or big guns to shoot them. The power required will always be great, say something like one horsepower to every hundred pounds of weight, and hence fuel can not be carried for long single journeys. The north pole and the interior of Sahara may preserve their secrets a while longer.

Upon the whole, navigable balloons and flying machines will constitute a great mechanical triumph for man, but they will not materialy upset existing conditions as has sometimes been predicted.

Science News-Letter, December 8, 1928

Paper that will not burn is an invention of a German chemist.