same directions, new trabeculae will be formed within it, thrusting in the lines of the new strains, Dr. Davenport stated. He also cited the cases of two crippled young women, one of whom had been bedridden all her life, the other since she was ten years old. The first patient has a heel-bone shaped roughly like that of a normal child but without the properly directed trabeculae. The second, who walked for a short time before she became crippled, has a nearly normally shaped heel-bone, but only a few directed trabeculae.

"The conclusion seems to be justified," said Dr. Davenport, "that the bone-forming cells respond to directive thrusts and pulls that are made upon normally functioning bones by forming the trabeculae in adaptive positions. Thus the bone cells are as truly responsive as muscle cells, . . . but respond to different stimuli in a different way."

Science News Letter, November 30, 1940

Rare "Flying" Mammal

ONE of the rarest of tropical animals, the colugo or flying lemur of the Philippines and the East Indies, was described by Prof. Glenn L. Jepsen of Princeton University, who discussed especially the question of its possible kinship to the bats.

"It is not a lemur and it does not fly," Prof. Jepsen told the Philosophical Society. Instead, he explained, it makes long glides, like a flying-squirrel, aided by a membrane that runs from its neck to its legs and thence to the tail, making a very effective parachute. It also has webbed toes, which add to its supporting surface. An exceedingly curious feature is the comb-like structure of its front teeth.

Some years ago, fossils from 50-million-year-old early Tertiary beds in Wyoming and Montana proved to be of animals related to the so-called flying lemurs but even more primitive. Comparisons of these with the bones of their modern relatives of the Asiatic tropics suggest, Prof. Jepsen reported, "that the 'flying lemurs' are an extremely ancient line, of limited ecologic latitude, and that they are only remotely if at all related to the bats."

Science News Letter, November 30, 1940

By aid of bleaching powers of sodium chlorite—chemical relative of common salt—America expects to make *wood pulp* comparable in quality to the Scandinavian.

RESOURCES

World's Silk Situation Snarled As If Kitten Had Ball

Japan, With Silk in Abundance, Forbids Weaving of Cotton or Wool Without Mixture of 20% Silk

WHILE American women unconcernedly go on wearing silk stockings, the world's silk situation grows as tangled as though some lively kitten had got the ball.

In Japan, worry over possible loss of such silk customers as the United States and India is leading to talk of finding new customers, presumably in Latin America.

Still the world's leading silk producer, Japan finds itself these days in the strange position of using more of its own silk than it can sell even to its perennial number one silk buyer, the United States.

With silk on its hands and a shortage of clothing, Japan ordered its people on October 1 to spin or weave no more cotton, wool, or rayon without mixing 20% of silk with the fiber. This is expected to use up an additional 100,000 bales of silk in a year, and will probably bring Japan's own consumption of silk up toward 500,000 bales. The United States last year bought about 384,000 bales, and has taken less this year.

Paradoxically, Japanese are forbidden the luxury of fine grade silks. Such materials are to be made for the foreign trade. They will thus bring in much-wanted gold for buying war material.

A new job for silkworms is even among the ways and means Japan is evolving for meeting her silk worries. Quantities of worms are to be used, according to plan, in making wool substitutes. This will help some of the 2,000,000 farm families that customarily raise silkworms among other products, and increase supplies of warm material.

Meanwhile, English women are buying no more silk hosiery or knit silk underwear after December 1, to conserve supplies of silk for military use.

Italy, cut off from selling silk to the United States since August, hopefully stores in warehouses silk we would normally buy. The silk is being reeled the way United States manufacturers like it, all ready in case —. Compared with Japan's major silk production, the silk on Italy's hands is not very great, but it is important to Italy.

If the United States should take the drastic step of cutting off Japanese silk imports, the break in trade would be more serious for Japan than for the United States.

Silk is listed as a strategic material, which this country does not produce and which it needs for such military purposes as parachutes and powder bags. Experiments with Nylon, Vinyon, and other synthetic textiles, however, have given reassuring results that we are not so dependent on silkworms after all.

So far as silk hosiery wearers go—and they are now consumers of most of the silk America gets from Japan—they would find themselves meeting a "silkless" era by various adjustments. Nylon, which has been stepped up in production beyond expectations, is a partial answer to the "what would we do without Japanese silk?" question. Other synthetics, and probably synthetics yet to be invented and improved, are part of the answer.

New fashions, such as anklets, sheer cotton hosiery, possibly a bare leg fad, would figure in the developments.

Some silk, also, can be had from sources other than Japan. China sent the United States over 15% of the silk we imported in the first nine months of 1940, a step up from less than 8% in similar months of last year.

Tropical America, too, may yet establish a silk industry. Ecuador is seen by some agriculturists as one favorable region, because of the dry, cool climate in high altitudes and the low-wage scale of farm labor.

The United States, which has tried to make silk production a paying crop since colonial days, continues to stub its toe against the economic factor. Caring for silkworms continues to be a farm and home business for low-paid workers. People who ask why Puerto Rico would not be a good place for a silk industry forget that the Wages and Hours law applies there as in continental United States.

Science News Letter, November 30, 1940