POPULATION

Influencing Family Size

➤ WHEN PARENTS make the decision of whether or not to have another baby, they are chiefly influenced by comments such as "Why don't you have another little boy?" or "For goodness sake, don't have any more children, you have enough work."

When grandma, the neighbors, the minister or the family doctor make comments like these, they form the strongest pressure on the couple to limit or add to the family.

Few couples give any thought to the interests of society at large. One of the best ways to insure that more babies arrive in homes of healthy and happy children is to see that neighbors are more discriminating in tossing off such opinions, Dr. Frederick Osborn, secretary of the American Eugenics Society, pointed out in *Eugenics Quarterly* (June).

Such opinions should be based, he said, on how well the couple are bringing up the child or children they already have and whether they are prepared to offer another child constant and affectionate care.

Too often, instead, they are based on generalities such as "small families are better" or "people ought to have large families."

Much stress has been laid on slum housing as a cause of juvenile delinquency, Dr. Osborn said. Bad housing also encourages irresponsible breeding of children who are not going to get the proper home care.

Good housing should make possible larger families among responsible parents. In developing housing projects, thought should be given to providing space adequate for a certain proportion of large families at a cost that would not unduly penalize the parents for having more than three or four children.

The offering of scholarships may help or hinder more intelligent and thoughtful parents to have more children, depending on the level at which they are available. Undergraduate college scholarships encourage more children for parents who want college education for their children.

Post-graduate scholarships have the reverse effect. They encourage students to postpone marriage to an age when they are not likely to have large families.

When people take some pains to limit the number of their children, those with lowest incomes have the fewest children and the number of children increases with the family income, some evidence indicates.

There is also evidence that the more responsible parents who give their children a better home environment and are more respected in the community are the ones who tend to have the larger families.

Science News Letter, July 2, 1955

BIOCHEMISTRY

Removing Antibodies

➤ VERY SMALL glass beads can be used to get disease-fighting antibodies from blood, Dr. G. Bonar Sutherland of California Institute of Technology, Pasadena, announced at the meeting of the American Association for the Advancement of Science's Pacific Division.

The method depends on a fact familiar to many housewives. That is that when protein, such as egg white, is poured from a glass, a thin layer remains on the surface and cannot be removed by ordinary washing.

The material adsorbed to the glass consists of a single layer of protein molecules. The same situation holds for other proteins, including blood serum and the antigen used to vaccinate against disease.

To get antibody protein, or gamma globulin, from blood, Dr. Sutherland coated very small glass beads with a layer of vaccine antigen used to immunize animals. These beads were then added to blood serum from the vaccinated animals.

The vaccine antigen on the beads combined with the antibody and effectively removed it from the blood serum. When the beads were washed and resuspended in a dilute acid solution, the antibody dissociated from the antigen-coated beads and the beads were then removed, leaving the antibody in solution.

The method can be used to get pure preparations of antibody for study. Dr. Sutherland hopes it will also be a tool for isolation of antibodies which are not detectable or obtainable by ordinary methods.

"Some of these antibodies," he pointed out, "are very important as agents of diseases such as allergies and Rh blood type reactions and other diseases of obscure origin."

Science News Letter, July 2, 1955

ORNITHOLOGY

NATURE RAMBLINGS

Woodpeckers

➤ "BRRRRRRRRRRR-RAP-RAP-RAP!"

Followed by a couple of exultant yells in bird-language.

If that kind of music wakes you up at ungodly hours, making you entertain illegal wishes for a shotgun or some other lethal instrument, you should feel complimented instead of annoyed. It means that some woodpecker has tried the end of your ridgepole and likes the sound of your roof.

Woodpeckers are connoisseurs in drums. They seem to enjoy hammering at hollow trees, even when they have filled themselves with worms. This gratuitous drumming has been interpreted as a courtship activity—a serenade to the woodpecker's lady-love—but it goes on even after the nesting season is over. So if the courtship explanation is good at all, it is only partially good.

It looks more as though this hammering were something the woodpecker does just because he likes to do it—useful part of the time, the rest of the time merely for fun.

The woodpecker is about the only familiar bird that employs a musical instrument. Other birds are more musical, but they are vocal artists. The woodpecker is a virtuoso on the drum—a Paderewski of percussion.

Woodpeckers are about as fine examples as can be found anywhere of close adaptation of an animal to a particular mode of life. In head and beak, in tail and claws, they are especially fitted to their job as hewers of wood. Their neck muscles are much more powerful than those of other birds of their own size, and their beaks are stout, long and sharp.

Their tail-feathers have stronger shafts than those of other birds, and each ends in a sharp, thorny point instead of a little plume-like fan, as is orthodox among tail-feathers. And each foot has two toes pointing backward and two forward, making an extra strong gripping pair of double tongs, for holding to the bark while the bird plies its tools.

Science News Letter, July 2, 1955