

GENERAL SCIENCE

Present Draft Inadequate

Scraping of bottom of manpower barrel within six months points up fact that armed forces cannot long be kept at 3,700,000 under current draft regulations.

► THE NATION'S armed forces cannot long be maintained under present laws and regulations at the current officially approved strength of 3,700,000, the Engineering Manpower Commission of the Engineers Joint Council declared in New York.

The nation will be faced with this fact when the bottom of the Selective Service manpower barrel is scraped before the end of the next six months, the commission pointed out.

The commission represents about 140,000 of the country's top engineers. Present at this special meeting of the commission to consider armed forces and technological manpower problems were Carey H. Brown of the Eastman Kodak Company, chairman of the commission, and engineers from some of the nation's largest corporations.

The commission called upon officials in Washington and the public to re-examine the entire question of the strength of our armed forces because, it said, future decisions in this regard will vitally affect our technological defense.

"No matter what size armed force we can derive from our population," the commission said in an exclusive statement to SCIENCE SERVICE, "it must be provided with offensive and defensive weapons which will enable the soldiers, sailors and airmen to achieve superiority over the greater numbers of the potential enemy. If the plain arithmetic of our manpower situation, and the significance it has for the strength of our armed forces, are not considered unemotionally, grave harm might be done to our technological superiority. To date, it seems to us, no adequate consideration has been given to these facts."

Commission Explains

The commission explained the arithmetic of the situation: "We are rapidly getting to the bottom of the barrel of 18½-to-26-year-old manpower pool, so far as the draft is concerned. Local draft boards all over the country will be hitting the bottom next January or February. From then on, Selective Service will have to depend on only those who become 18 each year. This, it happens, is only 1,100,000 every year and only 750,000, at the most, of those will be physically and mentally fit for service in the armed forces. Under present law they will be required to serve two years.

"An optimistic estimate of permanent, career armed forces personnel is 1,500,000. Obviously, 750,000 serving for two years will only provide another 1,500,000, not enough to bring the total up to 3,700,000, the present official goal. The discrepancy

has to be made up by those who enlist for longer terms, particularly in the Air Force and the Navy.

"The experience of Selective Service over the past two years shows that this is completely inadequate, as is demonstrated by the fact that the pool of men in the 18½-to-26-year age group available to Selective Service has dropped from 3,600,000 in June, 1950, to 1,076,000 in June, 1952. This is at a rate of more than 100,000 a month."

Supplementing its warning that calling upon those presently deferred will not solve the problem, except for a short time, the commission said:

"The Engineering Manpower Commission, with a policy of constructing a firm technological defense for our nation, is particularly concerned with those deferred for essential industry and to continue their training in college. This group amounts to 217,000: 184,000 students, 33,000 in essential industry.



EMERGENCY FLYING SUIT—The new United States high altitude pressure suit, the T-1, being tested by a pilot at the Aeromedical Laboratory, Wright Air Development Center, Dayton, Ohio, will enable pilots to survive in the near vacuum of the upper atmosphere.

"If all the physically fit in this group were drafted—less than 200,000—this would delay facing the basic problem for only three months," the commission pointed out. "Further, if this group were drafted, we would in the long run be destroying the ability of industry to produce the weapons needed for our defense; we would be making sure that, in the future, no new ideas would come out of our laboratories or our industrial workshops."

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CHEMISTRY

Devise New Method For Telling Fat in Milk

► A SIMPLE new method, using a detergent, for measuring the fat content of milk and cream was reported to the Milk Industry Foundation meeting in Chicago by a U. S. Department of Agriculture chemist.

The same equipment as for the usual Babcock test can be used, with the detergent substituting for the sulfuric acid of that test. The new method measures the fat content directly, rapidly and just as accurately as before.

Only two reagents are required. One is a water solution containing very small amounts of a nonionic detergent and a phosphate salt, and the other is 50% methyl alcohol. The new test was perfected by O. S. Sager, chemist at the Bureau of Dairy Industry, Washington.

Science News Letter, October 18, 1952

BIOLOGY

Amebas Have Red Tails, Expert Finds

► THE PIN-POINT of living jelly, the ameba, is neither as formless nor as directionless as scientists have thought it to be, Dr. R. J. Goldacre of London's Royal Cancer Hospital declares.

Studying the movement of the ameba, Dr. Goldacre has found it to have a tail, and a red tail at that.

The red pigmentation of the ameba Dr. Goldacre studied was diffusely distributed throughout the one-celled animal when it was resting, but as soon as it started to move all the pigment concentrated in a wrinkled rear area. There it stayed, making the identification of the tail possible.

When the ameba was made to move down a very narrow channel in which it could not execute a simple turn around, it would, on reaching the blank wall at the end of the channel, plant down a foot-like bit of its jelly and then execute a bit of acrobatics to swing its tail behind for its return journey. The red tail still brought up the rear.

This rear end of the ameba also seemed to be the initiation point for an electric current which then passed through the whole cell to give it impulse.

Dr. Goldacre commented that it was remarkable how the ameba's tail had so persistently been ignored by zoologists.

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