

telephone line or connected to a microphone and out of it will come a wavy line record that gives the exact characteristics of any voice, music or sound from zero to three thousand cycles per second. Duralumin wires of very slim diameter cast a shadow on the photographic paper record and their vibrations set in motion by the voice currents make the record.

A. E. Melhouse, of the Laboratories, also demonstrated a high-speed relay that can switch a current in three thousandths of a second. One use for this relay will be to silence a telephone line during pauses in the conversation. Less efficient kinds of similar relays have been used on the Transatlantic telephone circuits.

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more oil and very little coal, warned Prof. East. We may be hard put to it to find substitute sources of power. We are prodigals of inherited wealth now, and there is no guarantee that we shall develop the knowledge needed to develop new sources. Such things as wind, waterfalls and tide promise little, and the "cracking of the atom" is a dream.

The population of the world will be greatly changed by 2,500. The white race will be in full possession of the Americas and of Africa. The native Indian and black population will largely disappear, and their remnants will be absorbed in the hybrid population. Asia will be held solidly by the Mongolians, and the brown race may hold its own but will probably not gain.

A scientifically eugenic social system will be a necessity if the race is to survive on a high plane. Caste systems of the past were roughly eugenic, though scientifically unsound. Present-day humanitarianism is dysgenic. A system of penalties for breeding undesirables, and of rewards for the right kind of offspring, may come into existence.

We may by then wipe out all disease germs, and with them such ills as tuberculosis, diphtheria and the "flu." Through better care of infants, the average life-term may be raised to 65 years. But this does not mean that we shall live forever. The increased industrial pace will probably bring into being new "functional diseases."

And at the end, the scientists took the audience into their confidence. "All this is quite possible and may well come to pass," they said. "Anyhow, it's a lot of fun to speculate this way. But don't take any of it too seriously."

Science News Letter, January 10, 1931

PROPHECY

What Science May Make Of the World in 2,500 A. D.

Universal Language and Flood of Inventions Are Part Of Picture, But Warning Is: Don't Take It Too Seriously

A WORLD of the future, whose 350 hundred million people will be a grand blending of all races with one universal language for the spreading of culture and propaganda lies alike, benefiting from an ever-increasing flood of inventions and scientific discoveries and yet hard put to it for sources of power, with birth control knowledge in everybody's hands and babies at a high premium—these were some of the features of the centuries to come as imagined by three scientists who spoke before an interested, and at times amused, audience at the American Association for the Advancement of Science in Cleveland.

All this, and a lot besides, may come to pass—if. At the very outset, Prof. A. V. Kidder, archaeologist of the Carnegie Institution of Washington, warned his hearers, from his wide experience as a student of the rise and fall of past civilizations, that our present culture has all the symptoms of "being in for a terrific crash" unless by concerted effort scientists do something to forestall such an ill event.

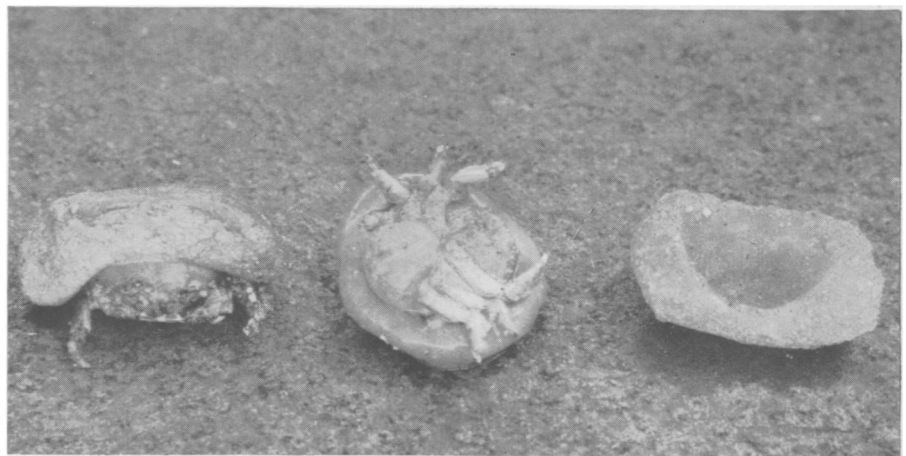
But assuming that civilization will go on, Prof. William F. Ogburn, of the University of Chicago, and Prof. E. M. East, of Harvard, presented some Wellsian snapshots of the future, from their points of view as sociologist and biologist.

The whole nation will be citified, Prof. Ogburn said. Developments in transportation and communication will make every new thing, that the city man is now first to get, available just as quickly to the farmer. Farmers will therefore tend to become like city

people not only in the mechanics of their daily lives, but also in their folkways, their philosophy, their religion and everything else.

There will be less contrast between farm and factory, for in many cases the factory will be on the farm, to make use of raw materials right at the source. Distribution of electric power will make this possible. There will be less of "artificial foods" made by chemical means than many speculative minds now imagine. The old trilogy of the sun, soil and rain will continue to be the mainstays for food and clothing. But due to increased efficiency in farming, only a fraction of the people will be needed on the land and the rest will be absorbed into industry.

By the year 2,500 there will be no



CAMOUFLAGE AND SHIELD

*In one are supplied by an umbrella-shaped piece of sponge that this Australian crablet cuts out with his chelae and holds over himself with his hind legs as he scuttles about in the coral pools of the Great Barrier Reef. Zoologists call him *Cryptodromia tumida* which might be somewhat loosely Englished as, "fat-little-fellow-who-hides-while-he-runs."*