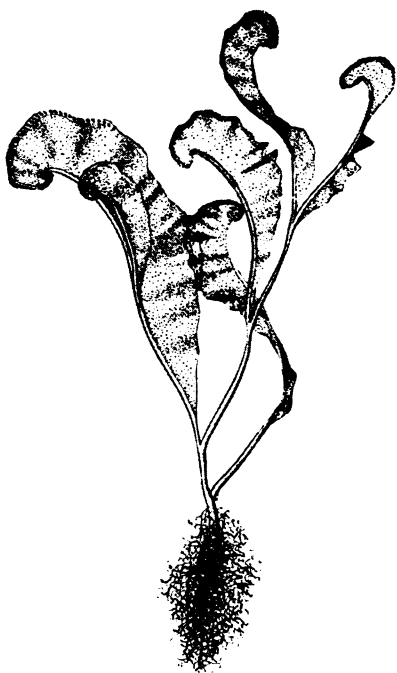


## CHEMISTRY

# Inert Krypton Gas Made To Combine With Chlorine



## RARE RUFFLES

*Drawing of a male specimen of the elusive "ruffle plant" which has been found in only two states.*

been given the English name "ruffle plant," because of its peculiar structure. It consists of a slender stem an inch or so in length, with a thin transparent green wing growing out at one side and curling over its end. The graceful undulations in this green wing caused one American botanist to describe it as "a ruffle standing on end."

The plant has thus far been found in only two states, Texas and North Dakota. It grows only in sheltered canyons, either submerged in shallow water or just above water level. Since water in this western country is not always a certainty in any one place, the plant has been very elusive, disappearing from a known habitat and reappearing suddenly elsewhere.

Close relatives are known from the Old World, growing in the same type of habitat: sheltered shallow waters in semi-arid regions. Here also it is an extremely elusive plant.

The ruffle plant belongs to the moss family, and is a member of that subdivision of it known as the liverworts. However, because of its exceedingly peculiar structure and mode of reproduction, it is pretty much a creature apart even among its own botanical kindred.

*Science News Letter, October 15, 1932*

**K**RYPTON, one of the rare gases that form a small percentage of the air, has been forced into its first known chemical union by three physicists of the Chemical Institute at Bonn, Drs. A. von Antropoff, K. Weil and H. Frauenhof. This is rated as a scientific triumph, for the rare gases are all exceedingly inert chemically, and under ordinary circumstances do not unite with other elements at all. Only one of them, helium, now well known because of its use in airships, has been driven into chemical activity by several English physicists.

The Bonn experimenters produced what seems to be krypton chloride by a combination of low pressure, low temperature and electric discharge. They circulated krypton gas by means of a pump, keeping the pressure at approximately one to five per cent. of ordinary atmospheric pressure, and maintaining a low temperature with liquid air. As the gas was circulated through a glass tube it was subjected to an electric discharge, and at the same time chlorine gas was introduced.

The pressure within the tube fell, indicating a decrease in the number of the gas molecules present, and therefore the probable combination of the two elements to form a compound with a smaller number of larger molecules. At the same time a dark-red substance appeared, which the investigators take to be the krypton chloride compound.

A similar fall in pressure was recorded when bromine was used instead of its chemical relative chlorine, indicating the possibility of the formation of a second compound, krypton bromide.

"Control" experiments, in which one or the other of the conditions of the main experiment was omitted, or in which argon, another rare gas, was substituted for the krypton, yielded only negative results.

The Bonn experimenters have reported their preliminary results to *Die Naturwissenschaften*. They are continuing their researches, and expect to publish a detailed account in the near future.

*Science News Letter, October 15, 1932*

## PSYCHOLOGY

# Family History May be Useful Guide in Choosing Vocation

**P**ARENTS should consider it their duty to keep a written record of the family history including the occupations of ancestors on both sides of the family and of all near relatives, and boys and girls should give consideration to this record in choosing their vocation, it is advised by Dr. v. Behr-Pinnow in a report to the *Deutsche Medizinische Wochenschrift*.

Musical ability is not the only vocational talent which may be handed down from generation to generation in a family, he points out. Special talent for teaching is also known to run in families. Dr. v. Behr-Pinnow has studied families in the old Bavarian

town of Mittenwald which had long been devoted to violin making. The many different aptitudes required for this vocation were frequently handed on entire from father to son. Even those descendants who have left their native home cling to the making of instruments despite unfavorable prevailing conditions. Of course, some will go into entirely different lines of work, but the hereditary aptitude is likely to break through again and again.

In the choice of a vocation, the hereditary factor must be considered more than has been the case in the past, he concluded.

*Science News Letter, October 15, 1932*