vidual impulses which one may "read" quite easily, and, if desired, a Fourier analysis may be applied to the oscillograms of the individual impulses.

Why endeavor to infer the properties of an individual egg from an omelette, even by means of elaborate chemical analysis, when the individual eggs can be purchased separately?

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THE PINE FORESTS OF COSTA RICA

IT was not through oversight that in his "Plantas Usuales de Costa Rica" Professor H. Pittier failed to mention the occurrence in that country of pine trees. No one knows the vegetation of Costa Rica so well as the writer of that now almost classic report, and if trees so important economically as pines did occur in Costa Rica, he could not be pardoned for neglecting them.

But, in a recent volume devoted to the "Tropical Forests of the Caribbean" (Gill, 1931), the reader is informed that "In British Honduras pine extends practically to the coast, but in Costa Rica it is confined to the uplands, and in Panama fades out entirely" (whatever the last phrase may mean). Opposite the page (p. 151) on which this statement appears, there is a map illustrating the distribution of pine forest in Central America. There is a modest strip of black extending the length of what apparently is intended as the main cordillera of Costa Rica (which does not exist), with a discreetly reduced, isolated patch of black farther south, near the Panama border.

Further, on page 317, under Table No. 3, it is stated that the forest area of Costa Rica consists of eight millions of acres, of which one million acres are reported optimistically as "conifers." Under "remarks" there appears the distressing information, "Pine type badly injured by fire."

The present writer is not prepared to criticize the forest data reported for other countries, although to one who has traveled by railroad from Puerto Barrios, Guatemala, to Guatemala City it is evident that the distribution of pine forest as indicated for that country is erroneous. Likewise, a botanist who has studied the flora of the Pacific coast of Central America will be unable to comprehend why Pacific Nicaragua should be mapped as "deciduous" forest, and all the rest of the Central American coast as "rain" forest. The facts are that exactly the same species of trees characterize the Pacific flora all the way from Guatemala at least as far as the Nicoya Peninsula in Costa Rica, and to Panama, for that matter. Floristic areas, unfortunately, do not usually coincide with political boundaries; it would make work easier for the systematic botanist if they did.

The subject of the southern limit of pine trees (and of all conifers) in North America is a matter of substantial scientific and economic interest, else it would not deserve mention here. In a book which purports to be scientific, the information published should be as accurate as possible, or else omitted. The distribution of pines in tropical America has been discussed by competent writers, and the facts could have been obtained without any great amount of research. Thomas Belt, in "A Naturalist in Nicaragua," reports that when traveling northward from Chontales, he observed the first pines in the vicinity of Matagalpa, and that is probably their southernmost extension in North America. (They do not occur, of course, in South America.)

The quotation cited in the second paragraph of this article should be corrected to read: "In Costa Rica pines are confined to dooryards," and in the table mentioned the area should be reduced from one million acres to one acre. A plot of that size, perhaps with a little crowding, would contain almost all the pine trees of Costa Rica. They do exist, it is true, for in two winters passed in the "uplands" I have seen some of them, but they were always about houses, and evidently planted. Systematic questioning of country people and of educated persons thoroughly familiar with the country failed to elicit a single report of the existence in Costa Rica of a native pine tree. In a recent letter to the present writer, Mr. F. Charles Clark, a lumber exporter of San José, Costa Rica, writes: "I have traveled practically all over the forests of this country, I might say, looking for native pine (genus *Pinus*), without success. I can not imagine anyone making a statement that there are millions of acres of pine trees in this country, and I, for one, should like to come across the first native tree." Friends of forest conservation may be comforted by the fact that under the circumstances it is scarcely possible that the Costa Rican pines have been "badly injured by fire."

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THE SOARING OF TURKEY BUZZARDS

THOUGH the means by which certain birds accomplish their soaring flight with wings held stationary is by no means the mystery it was before man learned to make use of upward air currents in flight with motorless gliders, the following observation seems of interest. The observation may not be unusual, yet neither myself nor any of the half dozen others who witnessed it had previously noticed it.

On a calm, very hot afternoon in August, 1931, in the level region of east central Illinois, a straggling flock of turkey buzzards were observed approaching from the north at a height of approximately five hundred feet. They were soaring along on a straight course with wings stationary. Not far from the observers they came underneath one of the scattered cumulus clouds present at the time and at once discontinued their flight toward the south and began to soar in circles, keeping directly beneath the cloud. During this circling, with wings still held stationary, they rapidly gained elevation, so that the course of each bird became a spiral. This upward, spiral, soaring flight continued for some minutes until the birds had become hardly visible, when they again resumed their southward course at a much greater elevation than before they had come underneath the cloud. A few minutes later a second flock of about a dozen came along from the north and under the same cloud gained elevation, as had the first one.

This is evidently a case where the birds made use of the upward air current beneath the cumulus cloud to gain elevation without resorting to wing strokes and the writer has been wondering if this is matter of common observation.

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ON THE EARLY HISTORY OF PLATINUM

IT is quoted generally throughout text-books and related literature that the first mention of platinum occurs about 1750. James Lewis Howe, in his "Bibliography of the Metals of the Platinum Group," including the years 1748 to 1917, states that the first reference to platinum is in the volume of don Antonio de Ulloa, "Relacion historica del viaje a la America Meridional," published in Madrid, 1748. The next reference is of 1751 when platinum was described in the literature by Watson and Brownrigg, and in the same year the properties of the ore were described by T. Scheffer.

As we know from historical record, don Antonio de Ulloa was not the first to write of the New Americas nor even among the very first to go there from the old country, so that it would not be altogether amiss to suppose that earlier commentators on the new lands, especially on Nuevo Granada as the Republic of Colombia was then known, might make mention of this curious "unripened gold"—as the Indians indigenous to those regions where it was found believed it to be and had planted it back in the river bed to give it more time to ripen into the yellow metal gold. In the Archivo General de Indias in Seville and in the Archivo Historico and Biblioteca Nacional in Madrid, Spain, there are kept the records of the transactions, descriptions and observations in minute detail between these extraordinary colonies and their mother country. There are, in addition, other libraries and private collections in Spain pertaining to the Americas, but it was among the three named that I was engaged upon another problem when I found references to platinum dated 1735. Some of these preserved documents refer to the shipment of rather large quantities (in one case 18 pounds) of alloyed metal which was called platina. In one document mention was made of a refined platinum, which had been treated with mercury prior to its shipment to Spain.

This (1735) is twelve years before don Antonio de Ulloa set out from Spain to make his scientific voyage (to measure meridian) and subsequently write his "Relacion Historica," and I have reason to believe that earlier references exist among this literature.

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REPORTS

THE INCORPORATION OF SCIENTIFIC SOCIETIES

AT the Cleveland 1930–31 meeting of the American Society of Plant Physiologists the question as to the advisability of incorporating the society was referred to a committee.

Of the twenty-one scientific societies investigated, fifteen are incorporated. Seven of these societies are incorporated in the District of Columbia, one in Illinois, one in Wisconsin, one in Massachusetts, one in New York and one in Pennsylvania. As the reasons for and ways of incorporating learned organizations may be of interest to other scientific societies the findings of the above committee are here summarized.

The advantages of incorporation are important, inasmuch as it establishes a learned non-profit organization as a legal entity, thus bestowing:

(1) Freedom from financial responsibility in any lawsuit against the members on account of any action of the society.

(2) The ability to hold property and to receive gifts and bequests.

A few scientific societies reported to our committee that incorporation had resulted in the accumulation of funds for research, etc., by giving greater security to endowment funds and thus making it easier for donors to give relatively large gifts and bequests.

The possible disadvantages are related to the freedom of action of the organization. An unincorporated