

A NEW STAR IN THE CONSTELLATION CARINA.—The first number of the Harvard College Observatory *Circular* contains a note to the effect that, from an examination of spectrum-photographs taken at the Arequipa Station of the Observatory, Mrs. Fleming has discovered that a new star appeared in the southern constellation Carina in the spring of this year. A photograph of a number of stars in the constellation contained a spectrum having bright hydrogen lines accompanied by dark ones of slightly shorter wave-length. Upon comparing this spectrum with those of Nova Aurigæ and Nova Normæ, it was seen that all three resembled one another, and were apparently identical in their essential features. A later photograph showed a slight change in the spectrum; a line at about wave-length 4700 being as bright as the hydrogen lines, though on the earlier photograph it was barely visible. These facts led to a close examination of all the sixty-two photographs of the region containing the star. Upon the first, taken in May 1889, no trace of the star could be made out, though stars of the fourteenth magnitude had recorded their existence. The star first appears on a negative taken on April 8 of this year, and last upon one obtained on July 1, its magnitude during the intervening period having diminished from the eighth to the eleventh. The approximate position of the star is R.A. 11h. 39m., Decl. -61° 24'.

CHOLERA IN GERMANY IN 1894.

THE part just issued of the *Arbeiten aus dem Kaiserlichen Gesundheitsamte* is devoted to a very elaborate report on all the cases of cholera which occurred in Germany during the past year. The inquiry has been so arranged that each district is responsible for its own report. Thus Prof. Dr. von Esmarch has drawn up the document relating to East Prussia, Prof. Dr. Flügge furnishes the statement for Schlesien, Prof. Dr. E. Fraenkel describes the outbreak which took place in the neighbourhood of Marburg, and so on, whilst a general introduction has been written by Regierungsrath Dr. Kübler.

In all 1004 cases of cholera occurred between May 23 and the middle of December, 1894, out of which 490 ended fatally. These figures, taking the population of the Empire at its official estimate of 49,429,470, represent 0.2 cases of cholera per 10,000, and a mortality from cholera equal to 0.1 per 10,000. The report is extensively illustrated, but one of the most instructive appendages is a map giving a graphic representation of localities in which cholera was notified. Here at a glance it may be seen how Germany suffers in this respect from her close proximity to Russia and Galicia in the eastern portions of her Empire, by far the greater number of outbreaks having taken place in East and West Prussia, whilst in the districts bordering on France, Belgium and Holland, hardly any cases of cholera occurred.

Dr. Kübler does not hesitate to assert that practically all the cases of cholera which took place were attributable to fresh infection imported into the country. West Prussia was last year at a particular disadvantage in this respect, for whilst cholera has invariably found its way from Russia along the water-ways, this part of Germany, being so intimately connected with Russia by the Vistula, in 1894 a specially alarming outbreak of cholera raged in these Russian and Galician districts, and thus every opportunity was afforded for its ingress into Germany.

The various reports seem to be almost unanimous in stating that cholera is disseminated throughout the Empire well-nigh exclusively by means of the traffic along the rivers or water-ways of the country, and that it is here that the greatest watchfulness has to be exercised. Such surveillance has, however, exerted a most salutary influence upon the hygienic conditions obtaining on ships, and although the interference was in the first instance opposed by the men, the latter are now most eager and active in carrying out the sanitary improvements, and the best results have ensued.

It is interesting to note that not a single case of cholera occurred in Hamburg,¹ and only six in the whole of the Elbe district.

There cannot be a doubt that these most satisfactory results are a direct consequence of the splendid way in which the regulations drawn up by the German Cholera Commission of 1893 were carried out, and that it is to the conscientious manner in which the various officials fulfilled their instructions, that

¹ The fatal case of cholera, which occurred in the Hamburg Hygienic Institute, is not included, as this was due to accidental infection during the carrying out of some laboratory experiments on cholera.

Germany owes her comparative freedom from cholera and its restriction when an outbreak did occur.

Prof. Flügge cites an interesting table confirming the improvement which has taken place in combating cholera, in which the total number of cases of cholera which have occurred in Oberschlesien from the years 1831 to 1894 are given.

Year.	Cholera cases.	Year.	Cholera cases.
1831	1658	1855-56	5498
1832	3270	1866	9069
1836	4324	1867	4438
1837	1159	1872-73	2332
1848-49	5903	1874	2499
1851	898	1893	7
1852-53	3856	1894	346

This improved condition, which is so apparent within the past twenty years, Prof. Flügge ascribes to the achievements of Robert Koch, whose labours have revealed not only the nature of cholera, but also the most effective way of dealing with it and crippling its power.

But perhaps the most striking testimony to the effectiveness of the measures taken to stamp out cholera, is to be found in the fact that in spite of the prevalence of cholera in East and West Prussia, the army manoeuvres were conducted on a large scale in this district, and no cases of cholera occurred amongst the troops. As an instance of the precautions taken, it may be interesting to read the following instructions which were issued, such instructions being by no means the most elaborate which were carried into execution.

During the mobilisation of troops on the Vistula, no eatables were allowed to be taken; to prevent the river water from being drunk, casks of boiled drinking water accompanied the soldiers, and every man was provided with an infusion of tea; further, it was ordered, and most strictly carried out, that all articles of clothing which had come in contact with Vistula water, were not to be returned to the barracks, but to be sent straight to the disinfecting station, and the men were further obliged to wash their hands with soap and pure spring water on the parade ground each time after the various drills had been gone through.

There seems to be no doubt that personal disposition to cholera, as in diphtheria and other zymotic diseases, varies with the individual, and members of a cholera-stricken household, although not themselves affected, may in cholera, as also in diphtheria, become the transmitters of the disease. This is an accepted fact in Germany, and Dr. Kübler states that last year this received fresh confirmation from the bacteriological evidence afforded by numerous investigations of perfectly healthy persons in cholera surroundings. The isolation of these suspects, Dr. Kübler regards as an important measure in helping to restrict cholera-infected areas.

This disposition to cholera, even in cholera-disposed individuals, appears to vary at different seasons of the year, and the consensus of opinion, derived from all parts of Europe, decrees the late summer and autumn as the period when the chances of infection are greatest. What the special circumstances are which determine this seasonable predisposition, no one rightly understands, and a great diversity of opinion on this question exists; but there can be no doubt as to the facts, and the following statistics of cholera cases per month, collected over a period of more than thirty years in Schlesien, bring out this point very clearly.

January	743	July	2029
February	515	August	7065
March	381	September	11065
April	591	October	10787
May	712	November	6949
June	1446	December	2648

The organisation and elaborate machinery necessary to combat effectively with cholera, and the discipline with which the sanitary precautions have been carried out in Germany, call for ungrudging admiration; it is, therefore, with the more surprise that we learn from Prof. Flügge's report how much remains yet to be accomplished in the management of so important a matter as disinfection. The most approved apparatus was frequently rendered useless by the ignorance of those to whom the work of disinfection was entrusted. "The modern practice and technique of disinfection is something," writes Prof. Flügge, "which every doctor does not *eo ipso* understand or can learn either from

books: it requires, of necessity, a thorough theoretical and practical training. The control of disinfection is in the majority of cases left in the hands of police officials who have no knowledge of the subject whatever, and thus numerous mistakes are made, and much unnecessary damage to property ensues. . . For cholera-disinfection, in my opinion, special courses of instruction should be provided for disinfectors in both the theoretical and practical application of the subject."

We cordially commend the perusal of this valuable report to our own public authorities, who might, thereby, possibly be stimulated to take some serious and effective steps in staying the ravages of, to us, a far more deadly enemy, *i.e.* diphtheria. The Hamburg cholera disaster has not been without its lesson to Germany; surely we need wait no longer for our authorities to be similarly roused to successfully combat diphtheria.

G. C. FRANKLAND.

A JAMAICA DRIFT-FRUIT.

THE dispersal of plants by oceanic currents is a subject full of interest, and no apology is needed in bringing it forward if thereby we stimulate those who have opportunities for observing the effects of this agency in various parts of the world. The valuable contribution made to the literature of the subject by Mr. W. B. Hemsley, F.R.S., in the "Botany of the *Challenger*," and since added to by himself, Mr. Guppy, and others, cannot fail to enlarge our knowledge in regard to the origin of plant-life on oceanic islands as well as on the littoral of much larger areas. Our first acquaintance with the fruit of the remarkable *Lodoicea* of the Seychelles, for instance, was as a waif floating on the surface of the sea, and hence one of its familiar names *Coco-de-mer*. In the West Indies the ripe fruits of a palm unknown in the Greater Antilles are continually brought by the Gulf Stream from the south, and washed ashore at Jamaica and other places. These are locally called "Sea apples" or "Sea cocoa-nuts." They are the fruits of the Bussu palm (*Manicaria saccifera*), found in Trinidad and the adjacent mainland of South America. The white kernel is sometimes fresh enough to be eaten after long immersion in salt water. This fruit was gathered by Sloane as long ago as 1687, and he remarked that it was frequently cast on the north-west islands of Scotland by the currents and the sea. The seeds of the Cocoon (*Entada scandens*), large brown beans about two inches in diameter, are so frequently cast ashore in various parts of the world, that they are commonly called "Sea-beans." Several plants have been raised at Kew from seeds picked up at the Azores. It is also mentioned by Robert Brown that a plant of *Cesalpinia Bonduc* was raised from a seed found stranded on the west coast of Ireland. Linnaeus also seems to have been acquainted with instances of germination having taken place in seeds thrown ashore on the coast of Norway. These are well-known and familiar examples of drift-fruits. The record might be considerably enlarged without more than touching on the fringe of the subject. It is hoped that botanists in suitable localities will give attention to this comparatively unworked field of investigation, and record the results of their observations.

In NATURE (vol. xxxix. p. 322), I gave an account, with woodcuts, of a drift-fruit that was collected on the shores of Jamaica. This had a very singular history. It had, in the first instance, been gathered nearly three hundred years ago, and presented by Jacob Plateau to Clusius. It was figured and described by many of the older botanists, but up to the time of writing in 1889 the plant bearing it had not been identified. The object I had in view in drawing attention to it in the columns of NATURE, was to enlist the interest of those likely to throw light upon its origin, and lead eventually to its identification.

FORMER HISTORY.

It is somewhat remarkable that a drift-fruit so plentifully brought by the Gulf Stream, and cast ashore in the West Indies and elsewhere, should have been so long a mystery.

The first notice, so far as I can gather, is given with a woodcut, by Clusius, in his "Exoticorum libri decem," lib. ii. cap. 19. This work bears the date of 1605. The following is Clusius' description, which is reproduced as it appears in the original, together with his representation of the fruit:—

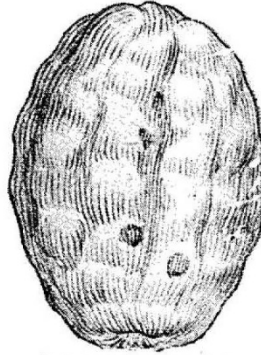
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Exotici fructus à Jacobo Plateau & aliis accepti.

Cap. xix.

Aliquot exoticos fructus mittebat ad me Jacobus Plateau, quum intelligeret me Exoticorum Historiam scribere, ut quantum posset meos conatus etiam in hac materia iuvaret, sed quos, præter binos, jam antè videram & descripseram.

Binos igitur illos, quos dixi mihi antè non fuisse conspectos, cum binis aliis aliunde acceptis, in tabella exprimi curabam quam hic subjicio. Primus illorum quos Plateau mutuo dabat, binas uncias cum semisse longus erat, quatuor in ambitu crassus, cine-



Drift-fruit (after Clusius).

raci coloris, quem aliquo operimento tectum fuisse arbitrabar: in quinque partes dividi posse, venæ per longitudinem ductæ indicabant; alioqui eminentibus aliquot tuberculis instar vesicularum obsitus erat, quæ aperta, inanes & inæquales lacunas ostendebant spadicei coloris & splendentes, quasi semen aliquod continuissent: valde durus autem erat is fructus, & adstringente facultate præditus.

About sixty years afterwards, Johannes Jonston, in "Historia Naturalibus de Arboribus et Fructibus" (1662), p. 102, refers to the same fruit. In 1680 both the description and figure given by Clusius were reproduced by J. Bauhin in "Historia Plantarum," tom. i. lib. 3, cap. cxi. fig. 1. It is next mentioned in Sloane's "Catalogus Plantarum" (1696), p. 214, in the following words: "Fructum nunc sæpissime collegi in Insulæ Jamaicae littus ejectum cum aliis maris recrementis." The fruit itself was recognised in 1889 by Mr. E. G. Baker, as existing in the Sloane Collection in the British Museum (Natural History) where it is labelled "No. 1656." Further, in 1764, a small and somewhat unsatisfactory figure was given in "Petiveri Opera," t. lxxi, fig. 5, with the information: "It is a hard oval fruit with seed-holes round its surface. Cat. 605. Found on the shores of Jamaica." In all the cases enumerated above, it is represented in its water-worn condition as given in Fig. 1 below. It is a hard bony fruit, about an inch and a half to two inches long, marked externally with mammillated protuberances corresponding (as shown in Figs. 2 and 3) with numerous cavities or resin-cysts existing in its walls. In the transverse section, Fig. 2, it may be seen that the fruit is normally five-celled, but two are suppressed. The seeds are solitary, and contain abundant albumen. There is no doubt it was once a drupaceous fruit, but the fleshy outer layer or sarcocarp has decayed or worn away by the action of water. What is now left is, in many respects, so unlike the fruit in the fresh state, that its origin must always have been somewhat difficult to trace.

In passing, it may be noticed that it possesses ideal qualities as a drift-fruit. The numerous closed cavities contained in the walls render it very buoyant, and easily influenced by the action of the wind, while its hard texture and the presence of resin preserve it from becoming water-logged or decayed. There is no record that the seeds have germinated after long immersion in salt water, or that the plant has established itself in a new locality outside its present area. These are interesting points for further observation.

RECENT HISTORY.

The chapter in the recent history of the fruit opened in 1884. It was then collected, by the writer, with other drift-fruits on the sandy-spit of land known as the Palisadoes enclosing Kingston Harbour, Jamaica. On this land the Botanical Department had