CERTIFICATION UNDER THE MENTAL DEFICIENCY ACT.*

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Mental defect is a disease not taught in any medical school, yet it is a province of medicine which requires special study; and furnishes cases for which the necessary diagnostic acumen is not afforded by a qualification awarded entirely on a knowledge of other branches of medicine. The recognition of mental defect is often difficult; the differential diagnosis from insanity, epilepsy, the state of being merely dull and backward, want of education, the exhaustion of physical illness, or the abnormality due to sense deprivation, aside from other rare diseases, is not always easy.

I would advise every member of the profession to provide himself with a copy of the Act and also with a copy of the Provisional Regulations; they can be obtained at a cost of 4½d. and 3½d. respectively from Wyman and Sons or any of the Government stationery offices, or through any bookseller.

I will consider very briefly the medical aspect of the certificate. On the prescribed form are two headings for the medical man to fill up:

- (a) Facts observed by myself.
- (b) Facts communicated by others.

As to (b)—facts communicated by others—the full names of those who give the information should be stated, and also their relation to the patient, although this is not obligatory; the evidence of more than one, if it is to the point, will obviously strengthen the certificate. The following quotations from actual certificates will serve to indicate the kind of facts required: "Has always been dull and backward." "Has never been like other children." "Has never grown up." "Can do no useful work." "Never works except under supervision." "Loses his way." "Cannot take care of himself." "Cannot go any errands." "Cannot be trusted with money." "Has never been able to earn anything." "Cannot keep a situation." "Is abnormally passionate." "Is extraordinarily obstinate." "Is open to any suggestion." "Will never wash himself." "Is very slow and stupid." "Has no memory." The Birmingham (Special Schools) Committee, of which I was chairman for ten years, found that among the high grade feeble-minded who are able to get work after leaving school, mental defect often makes itself plain by a constant change of situation (seven or eight a year), and inability to earn a living wage.

As regards (a)—the facts observed by the medical man himself—there are two headings:

1. At the time of examination.
2. Previously to examination.

The date of the previous observations must be recorded. When the patient has been seen before and the same conditions found it is clearly important to record it, especially if there has been a considerable interval, as that proves the disease is no passing disorder of mind.

There is no examination and no set of tests which provide an absolute standard. The opinion of an expert, after a few minutes' conversation and observation, is far more valuable than the records of a long series of tests conducted by a tyro, who judges by the results only. All the same, tests are useful, especially as a mere statement that a person is feeble-minded will not be accepted by the Board of Control, which states in Regulation 37 that "an order shall not be made upon a certificate which is not founded wholly or in part upon facts observed by the certifier." There is, however, no difficulty if we remember that peculiarities of appearance, of manner, and of conversation are facts which can be stated. A few years ago I read to the Branch a paper on tests of intelligence in which I detailed the most useful. It is therefore unnecessary for me now to do more than recall one or two. Let me return, however, to the threefold basis I suggest for certification—namely, peculiarity of appearance, manner, or conversation. I will consider the appearance first. If the defective conforms to one of the recognized types of

primary mental defect, namely, Microcephalic, Macrocephalic, or Mongolian, a statement to this effect is an important fact. If the bodily configuration shows no such complete abnormality, but exhibits several stigmata of degeneration, that is a fact suggestive of amentia; the important point is that while isolated peculiarities are often seen in normal individuals, they are usually multiple in defectives. In the large majority of cases, however, not only does the patient conform to no special type, but he shows no stigmata either. In some instances numerous scars of cuts and burns will be found, suggestive of the patient's inability to take care of himself. In others the slovenly, dirty and torn clothes give a useful clue. The manner of the patient is of the utmost importance, and may be the only evidence for certification. How does he enter the room? How does he meet a stranger? Gait and carriage must be carefully observed. How does he conduct himself during the examination? Does he take an intelligent interest, or is he quite indifferent? What is his capacity for attention and concentration? Even when the appearance and manner leave no doubt, an examination should be made to confirm the diagnosis; in most cases it is essential. If the patient cannot read or write, or tell the time, or perform simple calculations in spite of training, little further evidence is required. If he has such elementary knowledge, he may still fail in very simple tests. In all of these allowance must be made for age and also for any lack of education.

The kind of examination can be best described by citing extracts from actual certificates. "Slow and dull in manner and conversation, very slow and awkward at undressing, slow and inaccurate in simple calculations." "He told me that 2s. 6d., 6d., and 1s. together made 10s., and also told me that a horse has feathers on its head." "Does not know the date." "Does not know when Christmas day is." "Does not know when his birthday is." "Does not know how long he has been in this institution." "Told me that a penny was a halfpenny and a shilling a threepenny bit." "Says a horse has two legs." "Does not know which is his right hand." "Does not know which is the fourth finger of his hand." "Does not see any necessity for earning his own living." "Does not know how many brothers he has." "Cannot say what he had for dinner." "Does not remember anything unusual that happened last Christmas day." "Says the word 'insensible' means 'Are you sensible?'" "Says the 'opposite of honest' is being very careful with money, and not spending what is not yours." "Says the 'opposite of ugly' is 'Are you ugly?'" "Cannot describe how he came here."

Special tests sometimes useful are the following:

1. Turn his coat sleeves inside out and tell him to put it on.
2. Give him a knotted cord to untie.
3. Give him a match to strike.
4. Saying what is missing in a figure.
5. Crossing out test; letters or groups of dots.
6. Distinguishing the ugly from the beautiful in a pair of faces.
7. Tell him to repeat as many words as he can in three minutes; a child of 11 should be able to give at least sixty. An adult ought to give nearly sixty per minute.

An unlimited number of such tests can easily be devised. Often the most important point is not whether the correct solution is obtained, but how the problem is approached and carried out. Recently I certified as defective a woman, now under guardianship, who failed in no intellectual test; she was quick, accurate, and logical, but her torn dress, for which she accounted in a very stupid way, her obvious complete dependence on others and lack of initiative showed a degree of incapacity for shifting for herself and resisting the temptation to drink, which has been her ruin, that amply justified a certificate, especially as there was evidence of lifelong peculiar conduct, such as curtseying elaborately to any man she may meet on the road.

It is sometimes best not to give the details of tests in a certificate, but simply to say, "Could not perform certain simple tests." If necessary, the tests can be explained in court.

A word may be said in conclusion about moral imbeciles; no one can be certified as such unless he exhibits some sign of mental defect in addition to being criminal or vicious. A careful examination will generally reveal some

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weak spot. Great stupidity in attempts to conceal the crime, and absence of motive, are important clues; the man who steals a loaf of bread to give to his starving family is probably normal; the poor boy who robs his sister's money-box, and then scatters the coins among a crowd of children in the street, is probably defective.

INSECTS AND WAR:

XI.—THE MOSQUITO (*Anopheles maculipennis*).

BY

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(Continued from p. 106.)

There in a wailful choir the small gnats mourn
Among the river shallows, borne aloft.
Or sinking as the light wind lives or dies.

JOHN KEATS, "To Autumn."

THE female imago hibernates. Finsch made observations and found it hibernating on the frozen Siberia Tundras, beneath the moss and snow. Sterling found them in North America when the snow was melting, in great numbers, and he and his party were terribly bitten. There is no doubt that female imagines live throughout the winter, and they can be found in England as a rule hibernating in cellars, old out-houses, chicken-houses, or disused farm buildings. These hibernating females disappear early in May, presumably having laid their eggs. Dr. Thayer of Baltimore describes these creatures, having found them on the roofs and walls of barns near New Orleans, and although some may pass through the winter months in the egg state, probably the great majority of them hibernate as imagines. Whether the male also hibernates is doubtful. Grassi says he never found the male of *A. maculipennis* in the winter, only fertilized females. But as the warm weather sets in the female generally becomes active and bites, and the native Indians consider these elderly and famished females to give more annoyance than any other stage in the life-cycle. In the warmer climate of Southern Italy they not infrequently hibernate in grottos and caves. At times they occur in such numbers that they can be swept up. After depositing her eggs the hibernating female probably dies. This usually happens in May.

In the old days we used to collect gnats, keep them in a receptacle unprovided with any food, and when they died of starvation after a couple of days, we wrote poems or essays on the "Transitoriness of Life" and the "Evanescence of Time."

The thin-winged gnats their transient time employ,
Reeling through sunbeams in a dance of joy.

MRS. NORTON.

Nowadays we feed them. Bananas, sweetened milk, pine-apple, or almost any other vegetable juice is their diet, and they live in captivity for weeks. At Cambridge in 1900 (July to August) Professor Nuttall was successful in keeping females alive on a diet of bananas and water from two to eight weeks, but it was found essential to keep the atmosphere fairly moist and the food fresh. Grassi found that he could only keep *Anopheles* alive in his laboratory in Rome for a month.

Both *Anopheles* and *Culex*, at any rate in captivity, lay their eggs early in the morning. Apparently the nature of the food has some effect upon their fertility, certain observers stating that when male and female are fed on vegetable food alone there is no fertilization and no oviposition. A diet of blood evidently assists the female to lay her eggs, and perhaps to get them fertilized. One female *Anopheles* laid a batch of 146 eggs, and subsequently laid six more. But, as a rule, a fertilized female does not lay a second batch unless she receives a second meal of blood. The eggs are laid two or three days after the meal. There is also some evidence that a meal of blood is necessary if fertilization is to be effected. As Austen says in the report of the Sierra Leone Expedition of the Liverpool School of Tropical Medicine, "the following law is likely to hold good for the *Culicidae* which feed on man—at least for the common species; although these gnats can live indefinitely on

fruit, the female requires a meal of blood both for fertilization and for the development of the ova. In other words, the insects need blood for the propagation of their species." Undoubtedly, if mosquitos ever talk, they would talk like Mr. Waterbrook, Hamlet's aunt, and the "simpering fellow with weak eyes" talked when David Copperfield dined with the first-named at Ely Place, Holborn. The burden of their song was: "Give us blood."

But a word of caution must be given here. Most of these deductions are based upon mosquitos in captivity; whether the same is true of them in natural conditions is not quite certain. If it be so it is difficult to see how these countless millions of gnats and mosquitos which dwell in the barren regions around the Polar circle ever keep going.

It very frequently happens in the animal kingdom that females are much more numerous as well as much larger than the males. As Kipling tells us: "The female of the species is more deadly than the male." Professor Nuttall and I did not notice that this was the case with *Anopheles*. There is some evidence that the male hatches out earlier than the female, and that in Southern Europe there may be three or four generations in the course of the season, the first beginning in April and the fourth taking place between the middle of September and the middle of October. After that date no larvae were found. About four generations also occurred in the neighbourhood of Cambridge, according to observations of Professor Nuttall. Kerschbaumer has calculated that if the average number of eggs laid by a female be 150, the number of the descendants by the fourth generation would amount to 31 millions. This readily accounts for the fact that in certain parts of the world they occur in perfectly enormous numbers, and if it be true that blood is essential for fertilization and oviposition, very few of these potential mothers can breed. In nature they will feed on a great variety of vegetable juices—melons, wild cherry blossom, bananas, oranges, over-ripe mangoes; they suck the "juices" of allied species of insects just when the imago is issuing from the pupa case and before their integument is hardened, or they pierce the soft skin of the cicada, and occasionally attack the chrysalids of a butterfly. One of the most curious sources of food is very young trout. The adult insect attacks the *petit poissons filiformes*, "literally sucking out their unsuspecting little brains before they could escape." Grassi is doubtful whether the adult males feed at all. He states that he never found any food in their stomach, nor has he ever seen a male feed. But Professor Nuttall's experiments in Cambridge prove that males were seen repeatedly to feed, and to feed hungrily, on cherries, dried fruits, dates, and bananas.

Anopheles maculipennis (female) sucking my arm.

As mentioned before, the proboscis of the male is too weak to pierce the human integument, but Howard notes that it will suck up water, molasses, and beer; and Gray, at Santa Lucia, mentions that in that island *Culex* had developed a great fondness for port wine. One particularly favourite food is rose-buds covered with aphides, probably due to the sweetened secretion which these insects exude. The feeding is sometimes very ravenous, so that the insects become distended, the bright colour of the blood readily shines through the joints of their chitinous armour, and sometimes, like Baron Munchausen's horse after the adventure with the portcullis, what goes in at one end comes out at the other. In fact, as Dr. Johnson said of the children at a school "where discipline was maintained without recourse to corporal punishment," "But, sir, what they gain at one end they lose at the other!"