

Wolverhampton, died with the head and neck arched back and the legs in extension.

The *post-mortem* report stated that coliforms were obtained from the brain and also, in rich culture, from all levels of the intestines. As there was a little milk in the stomach it would seem in this case that the portal of entry was the mouth. It is rather surprising that Terlecki and Shaw were not able to obtain cultures from the intestines, particularly of Case No. 2 which lived for a week and presumably must have suckled.

Yours faithfully,
J. N. WRIGHT.

80, Mickleton Road,
Earlsdon, Coventry.
March 9th, 1959.

An Aerosol for Bitches in Season

Sir,—I write to draw the attention of my colleagues to an aerosol* which has just come on the market for use on bitches in season. I realise that the evidence on which this letter is based is purely reports by clients, but my object in writing is to bring to the notice of others a product which I have found appreciated by clients.

Some two years ago I was approached by a consulting research chemist to try out an aerosol spray which, it was claimed, not only deodorised but was actually repellent to dogs. It is fair to say that I agreed to give this product a clinical trial rather with my tongue in my cheek, thinking that it was probably as good as, but no better than, various similar products already available.

As a result of my clients' reports my opinion is quite different from that anticipated. I understand from a neighbouring colleague that her experience with this preparation is similar to mine and that reports from clients in that practice have been equally favourable (Joshua, 1959).

Clients to whom this spray was given were carefully selected for reliability, in addition to being bitch owners who either suffered considerable nuisance from street dogs or who had a dog living on the same premises with bitches. With one exception all clients have given favourable reports; some have been so enthusiastic that they have bombarded me with demands to know when the aerosol would be on public sale during the rather long interval between the finishing of my trial supplies and its very recent marketing.

There is little doubt that the claim that the spray has repellent action in addition to the reputed deodorant action ascribed to chlorophyll is not unfounded. This gives the product an additional use in that it prevents further fouling of one's premises by subsequent dogs when a patient has already urinated in surgery or waiting room. In this respect it is markedly superior to the usual deodorants I have previously used.

The product is an aerosol containing chlorophyll and certain essential oils of vegetable origin dissolved in a mixture of fluorocarbons. I feel sufficiently con-

vinced of its usefulness to have asked local chemists and pet stores to stock it in order that I may be able to tell clients where they can obtain it. It is also, of course, obtainable direct to veterinary surgeons should this be desired.

It will be appreciated that, in common with other like products, normal care must still be taken of on heat bitches. It is merely that nuisance is minimised and exercise considerably facilitated by its use, both valuable properties in these days of dense dog population in heavily built-up areas.

Yours faithfully,
C. G. HOPSON.

17, Sneath Avenue,
N.W.11.
March 14th, 1959.

Reference

JOSHUA, J. O. (1959). Personal communication.

"Eclipse" and Sainbel

Sir,—With regard to Mr. Barber-Lomax's letter, I was particularly interested in his reference to the arrangement of the bones in the "Eclipse" skeleton.

Some few years ago, I had the opportunity of viewing the skeleton (together with those of "St. Simon" and his son "Persimmon"), at the Natural History Museum in South Kensington. "Eclipse" had a very peculiar action, which was attributed to his croup being higher than the withers. This feature was not evident in the skeleton, but I have never seen vertebral spines so completely fused. The straightness of the "St. Simon" shoulder also illustrated a deviation from the original.

These skeletons have not been on view to the public for some time, but are stored in the basement. "Brown Jack" is on display also, together with the stuffed "Mick the Miller."

Yours faithfully,
VICTOR DOWLING.

Mallow,
Co. Cork.
March 8th, 1959.

Game Eradication

Sir,—It was with interest that I read Mr. H. E. Hornby's letter in your issue of January 10th of this year.

One cannot but be amazed at the assurance with which the protagonists of the slaughter of wild animals uphold the game eradication policy as the way in which trypanosomiasis may be controlled. E. F. Whiteside (1958) discusses some 18 different methods including fly-free cattle corridors; insecticides on animals; game fences; fly traps; sprayed insecticides; bush clearing; land usage; burning; biological sterilisation and radioactive sterilisation of male flies. He gives very scant reference to game annihilation which is not practised in Kenya, but which accounts for, I believe, more than 25,000 head a year in Southern Rhodesia.

Even in Uganda, where a game slaughter policy is being carried out in the Ankole area, the tsetse fly has been, according to Robertson (1958) driven from 1,700 square miles of country in Karamoja to the Sudan border by selective bush clearing—an anti-

* Skipit, Airkem Ltd., 28, Sackville Street, London, W.1.

trypanosomiasis measure known since 1923. Bush clearing is regarded in Kenya merely as a part of land development—of the process of turning unproductive bush into cultivation and grazing (Whiteside, 1958). The game eradication campaign in the Ankole area of Uganda, whose main purpose, we gather, was to stop the spread of the tsetse fly into Masaka, was chosen on the grounds principally of cheapness, and we read that the destruction of irreplaceable herds of ungulates in the Ankole area, instead of bush clearing, makes a saving of £300 a square mile (Robertson, 1958). The total number of game killed in this area of Uganda is some 50,000 animals over the last dozen years. If there are going to be any results from the modern attempt to institute a policy of game management and utilisation, the saving of £300 a square mile may in future years come to be regarded as one of our classic economic farces. Bush clearing has failed to eliminate the tsetse fly in certain areas, but so has the slaughter policy failed to prevent the spread of fly to Masaka where its presence is now officially admitted.

Other successful measures against tsetse fly have been the extirpation of *G. palpalis* by insecticides in the Kujja Migori river system in South Nyanza, the Nyando river basin in Kenya (Wilson, 1953) and in the Malawa and Bukedi districts as well as in several other areas. Excellent work is being done at the present time by a study of the fly habitat: it appears from this work that the habits of the tsetse fly are so predictable that his habitats may be sprayed selectively with the use of only a small part of the former insecticide expenditure (Annual report, Kenya 1957). In the same report we read of results with the use of fly traps both with and without "attractants." Some success has also been achieved through the feeding of insecticide to cattle by mouth so that these cattle act as bait to haematophagous flies (Annual report, Kenya 1955 and 1956).

Trypanosomiasis in cattle is typically a chronic and not an acute disease, which responds to treatment with various drugs. It cannot be compared, therefore, with diseases such as foot-and-mouth, rinderpest, contagious bovine pleuropneumonia, and a host of others which present their problems in Africa and for which there is no specific treatment apart from prophylactic vaccination.

The chemotherapy of trypanosomiasis has made great strides since its first real success with antimosan in 1928, and it is already possible to send cattle into infested areas under drug "umbrellas" using compounds such as prothidium, which last for some 5 months and under some conditions considerably longer. Besides prothidium there are a number of drugs such as phenidium, dimidium bromide, antricide, berenil and novidium, and it is almost certain that even greater advances will be made in the chemotherapy of this disease in the near future. There is also the very interesting work of Dr. Soltys (1958) suggesting that an immunity to trypanosomiasis may be induced, and the "biological sterilisation" method of fly reduction (Vanderplank, 1947) on the basis of which a tsetse population was greatly diminished in Tanganyika. The possibly successful method whereby sterilised males are released to

compete with the fertile ones, as was done so successfully to combat the screw-worm pest on the island of Curacao, may be mentioned also.

Recent studies on the feeding habits of the tsetse fly may assist other methods of control, and they reveal that he is very selective with regard to diet and will tend to feed on his favourite food if that is available. Clearly there is a vast field of study along these lines, and already there are a number of reports available. To choose one at random, work at Kiboko in Kenya showed that *G. longipennis* prefers the rhinoceros, as 130 out of 164 squashes of tsetse meals tested proved to be rhinoceros blood. The remaining feeds were from buffalo (23), ostrich (4), giraffe (3), elephant (2), lion (1), and pig (1). No kongoni (hartebeest) impala or Grant's gazelle bloods were identified among those tested, although all of these animals were present in greater numbers than the others (Annual report, Kenya 1957).

It would seem, Sir, that an outmoded policy of animal destruction is being pursued in several parts of Africa without real grounds except that its immediate cost is less than more advanced and scientific methods. Furthermore, it is being perpetrated on the very debatable grounds that the antelope, gazelle, buffalo, etc. have no value. The study of these magnificent animals is only beginning, and we are as yet almost completely ignorant of their habits, food utilisation, incremental rates and migration cycles. While the first reports are beginning to come in on their probable value as providers of protein food under a policy of game management, we should pause before completely destroying what is virtually, as yet, an unknown quantity. We may be called to account for our misuse of such natural resources by present and future generations.

Yours faithfully,

Makerere College. A. M. HARTHOORN.
University College of East Africa,
Kampala, Uganda.

March 9th, 1959.

References

- Annual Report of the Zoological and Tsetse Section. Department Veterinary Services, Kenya, 1955 and 1956.
Ibid. 1957.
ROBERTSON, A. G. (1958). "Background to Uganda," No. 191.
SOLTYS, M. A. (1958). *Vet. Rec.* 70. 657.
VANDERPLANK, F. L. (1947). *Trans. R. Ent. Soc. Lond.* cited by Whiteside, 1958.
WHITESIDE, E. F. (1958). "The Control of Animal Trypanosomiasis in Kenya." A paper for the I.A.C.E.D. Symposium, 1958.
WILSON, S. G. (1953). *Bull. Ent. Res.* 44. 711.

Skin Grafts as an Aid to Intestinal Anastomosis

Sir.—Against my better judgment I feel drawn to reply to comments made regarding this procedure by Messrs. Hole and Littlewort (*Vet. Rec.* 71. 199). I would make quite clear that the miserable experiences referred to are most definitely my own, but would add that in discussing this problem with quite proficient small-animal surgeons, the general feeling has been that results have not been on the level one would like to associate with surgical procedures.

The main problem facing any practitioner advocating such an alternative procedure is that this type of