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## SENATOR WITHDRAWS HIGH SCHOOL CRUELTY BILL

Apparently irritated by requests to stop cruel experiments in high school science classes, the New York State Department of Education tried, unsuccessfully, to slip through an amendment to the state anti-cruelty law which would have allowed unlimited pain infliction on animals in high school biology classes.

A shocked public, when it learned the facts, protested so strongly to the Senate Codes Committee where the bill was pending, that its sponsor, Senator George R. Metcalf, withdrew it, stating that the Department of Education had given him a "misleading memorandum." The Senator said, "I got what is known in the trade as a Brodie." (*Rochester Democrat and Chronicle*, February 13, 1964)

Miss Beeson of the Department's legal division, stated that she wrote the bill and volunteered emphatically that it does apply to high schools, though the phrase used to describe places which she proposed to exempt from New York State Law, Section 185 ("Overdriving, torturing, and injuring animals: failing to provide proper sustenance") hardly was calculated to inform the reader of this fact. The proposed amendment read: "Nothing herein contained shall be construed to prohibit or interfere with any scientific experiment or investigation in any accredited or degree granting institution of the university of the state of New York."

The bill is dead for this year, but the callous disregard both for animals and for the developing characters of young people throughout the huge New York State school system remains in the Education Department.

### P.T.A. Groups and Humane Societies Should be Alert

In the event that other promoters of unlimited animal experiments should attempt similar tampering with anti-cruelty laws in other states, Parent Teachers Associations and humane societies are urged to be alert.

Mr. C. Raymond Naramore, Executive Director of the Humane Society of Rochester and Monroe County, and an experienced high school teacher himself, issued a statement on behalf of the New York State Humane Association which gives background on the problem.

"Two years ago, a high school biology teacher of fourteen-year-olds in Monroe County became very much disturbed when I protested his using white mice in a cancer transplanting experiment in his classroom. Rochester physicians and the administrators of the University of Rochester Medical School backed my protest wholeheartedly. . . In the same high school classroom in which this so-called cancer research was to have been made, a terrified little

## FALSE STATEMENTS BY MEDICAL RESEARCH SOCIETIES

In 1955 Dr. Robert Bay was awarded the Albert Schweitzer Medal of the Animal Welfare Institute in recognition of his outstanding humane care and management of a large colony of experimental beagles at the Radiobiology Laboratory, College of Medicine, University of Utah. Shortly before he flew east to receive the medal, Dr. Bay resigned his position when he was denied the right to put a severely suffering dog out of its misery. This dog had 27 different fractures and severe ulceration of the mouth resulting from the radioactive materials with which it had been injected. There was no valid scientific reason for prolonging its agony, and the arbitrary cruelty of those in charge of the Radiobiology Laboratory was reported to the thousands of readers of the INFORMATION REPORT (Vol. 4, No. 5).

What was our surprise, then, to find that this same institution is now claiming that *it*, rather than Dr. Bay, was awarded the Schweitzer Medal and that "Bob Bay was never denied permission to euthanize an animal." This outrageous falsification is published in the current issue of the New York State Society for Medical Research Bulletin under the heading, "A Minister Investigates the Investigators," and though it is only one of the many untrue statements contained in this Bulletin, it is the one which the AWI could not honorably leave uncorrected since it deals with the Schweitzer Medal and with a truly humane scientist, the first winner of the medal, Dr. Bay.

A second example of brazen falsification of past happenings is included in the current "Events" of another medical research society, the National Society for Medical Research, which undertakes to distort the facts of the Zoologicals Worldwide case, actually going so far as to call this case of gross cruelty "a dishonest anti-vivisectionist gimmick"!

### The NSMR Version

"... a pet dealer who had tried to act as a supplier of laboratory animals and had failed financially killed his unsold stock of animals. Humane Society agents photographed the bodies lying in burial trenches and obtained nationwide publicity to the effect that this ugly spectacle illustrated the need for federal legislation regulating animal experimentation. The publicity did not mention the fact that no legislation proposed or discussed would affect such situations.

"However, the device worked. Rep. Ashley of Ohio cited the Virginia incident in introducing his bill to restrict animal research. The *Washington Post* editorialized to the effect that the bankrupt animal dealer had shown the need for Congress to adopt the Clark-Neuberger-Young bill."

### THE FACTS

Zoologicals Worldwide was an importer and dealer handling all kinds of experimental animals from hamsters to gorillas as shown in the listings of the National Academy of Sciences-National Research Council Publication No. 907 on the sources of laboratory animals. It had a board of directors of well-established businessmen. ZW's failure came after front-page publicity on the appalling negligence and cruelty. Newspaper reporters photographed the barn and trenches full of dead animals. A neighbor called the police. The Washington papers carried the admission by National Institutes of Health spokesmen that NIH had inspected and approved the ZW barn, thus clearly demonstrating NIH's incapacity to observe or prevent even the most obvious and extreme abuse of animals. NIH was a good customer of ZW's, getting regular shipments of dogs from them, the last group just ten days before the publicity led to a shutdown of the premises. Most medical research is done in our country using NIH money and NIH approval of facilities and procedures. Federal regulation of animal experimentation, removing control from NIH, is clearly called for in the light of this performance.

ZW's cruelty was a shameful fact, not a "device." Rep. Ashley who had never been in touch with groups sponsoring humane legislation read the newspaper report and introduced a bill the next day. Rep. Ashley selected the less restrictive of the two House bills on which hearings had been held in the previous year.

The *Washington Post* published an editorial which is as sound today as it was then. (For the text of the editorial and additional details on the case see *Information Report*, Vol. 12, No. 2).

hamster had been caged several weeks with a six foot boa-constrictor waiting to be devoured so that 'the pupils could observe the digestive process of a snake.' I threatened to arrest the teacher if he did not remove the trembling

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hamster from the cage. I could stop this unnecessary cruelty because Section 185 of the Penal Law prohibits it. . . . As President of the New York State Humane Association, I went to Albany last spring to meet with Dr. Warren W. Knox, Assistant Commissioner of Education for Instructional Services, and Mr. Hugh Templeton, Supervisor of Science Teachers in New York State, to protest a cancer transplant experiment on white mice in Schenectady Junior High School and asked for a statement of policy from the Department of Education on the use of animals in high school biology class experiments that involved suffering or cruelty. Dr. Knox asked me how I could prove that an animal ever suffered pain. Mr. Templeton said he thought some children should be allowed to watch animal experiments in high school so that they would overcome any squeamishness they might have."

No policy statement was issued. Instead the "sneak" attempt to exempt high schools from the anti-cruelty laws was pressed by the Department.

We suggest that it is time for a thorough reform in the New York State Department of Education and that reasonable standards of humaneness and honesty be required. The people who shape policy for the education of children of populous New York State should at least have an elementary grasp of the meaning of the word "education."

### AMBASSADOR PATTERSON PRESENTS MEDAL AND SCROLL

Ambassador Richard C. Patterson, Jr., Commissioner of Public Events of the City of New York, presented the 1963 Schweitzer Award of the Animal Welfare Institute to Ann Cottrell Free\* at the annual meeting of the Institute, December 16th. He made a second, unexpected presentation of one of the highest honors offered by the City of New York, a scroll in which Mayor Robert F. Wagner made the following proclamation:

CITY OF NEW YORK  
Know ye by these presents that I  
ROBERT F. WAGNER  
Mayor of the City of New York  
do hereby present this  
CERTIFICATE OF APPRECIATION  
to  
ANN COTTRELL FREE

Authoress who has devoted her splendid talents to further the welfare of animals, particularly those in laboratories; and for her crusade for legislation to ensure greater care and protection of animals in a more sympathetic and humane society.

In witness whereof, I have hereunto  
set my hand and caused the Seal of  
the City of New York to be affixed  
this Sixteenth Day of December, 1963  
ROBERT F. WAGNER

Ambassador Patterson, who has long been active in opposing cruelty to animals, is a staunch conservationist and a trustee of the New York Zoological Society whose President, Dr. Fairfield Osborn, was unavoidably prevented from taking part as planned in the meeting. Ambassador Patterson read the statement which Dr. Osborn had written for the occasion as follows:

\*For details on Mrs. Free's achievements,  
see *Information Report*, Vol. 12, Nov. 5.

### Statement Concerning PRESENTATION OF SCHWEITZER MEDAL TO ANN FREE

It is a keen personal disappointment that I am unavoidably prevented from taking part in the occasion of the presentation to Ann Free of the Schweitzer Medal.

\* \* \*

It is good to realize that people like Ann Free exist. Fortunately, there are at all times a few such people who inspire others to be considerate and kind to what we consider the "lower creatures" on this earth. For my part, I do not care to classify any kind of living thing as higher, lower, medium or otherwise. The essential truth is that all life on this earth represents an interwoven and interrelated unity. Men like St. Francis of Assisi in olden times and Albert Schweitzer today give inspiring evidence of this

truth. At the present time, when the force and impact of modern civilization fall so heavily upon all natural things, there can, too readily, be forgetfulness of the values that exist in the lives of other creatures whose welfare depends totally upon man and his consideration of their welfare.

Ann Free is not one of those who forget. Through her work and her writings, through her sense of reverence of the rights of living creatures, through her actions in protecting them, she has brought to the consciousness of many, many people the meaning of humanity in its broadest sense.

FAIRFIELD OSBORN

In her response, Mrs. Free spoke of the work for laboratory animals and emphasized the unfairness of opponents who had classified the series of articles she wrote this summer for the North American Newspaper Alliance as "neo-anti-vivisectionist." She spoke glowingly of the change in accommodations now made for the test beagles of the Food and Drug Administration — from small, dark cages in a windowless sub-basement to comfortable kennels with outside runways.

Mr. Leo Miller, Deputy Commissioner of the U.S. Food and Drug Administration, spoke of the many obstacles which were finally overcome to obtain the comfortable quarters for the beagles in the new Beltsville buildings. It took four years from the time Mrs. Free's article reporting on the dogs' plight appeared in the *Washington Star* till properly designed kennels were built. Commissioner Miller emphasized the important scientific gain in the accuracy of tests conducted on the dogs which will be achieved through use of the improved quarters. He pointed, too, to the economic value of a dog which has been under test for a long period. Thus the humane treatment of the animals increases scientific accuracy and prevents waste. The F.D.A. kennels are expected to serve as a model for other similar installations.

Mrs. Ludwig Bemelmans, President of the Society for Animal Protective Legislation, spoke on the urgent need for enactment of the Clark-Neuberger (S. 533) and Ashley (H.R. 5430) bills to require humane treatment of experimental animals. The bills have been pending in the Senate Committee on Labor and Public Welfare and the House Committee on Interstate and Foreign Commerce throughout the first half of the Eighty-eighth Congress and Mrs. Bemelmans emphasized that despite the obvious need for the legislation and the reasonableness of its provisions the opposition is fierce and increased public demand is needed to obtain favorable action in 1964.

### "TO SERVE BOTH SCIENCE AND DECENCY"

An excellent summary of the need for legislation to require humane treatment of experimental animals appears in a comprehensive book about cats, *Wholly Cats* by Faith McNulty and Elizabeth Keiffer, illustrated by Peggy Bacon, (Bobbs Merrill paperback edition, pages 182-189.) With the kind permission of the authors, the following extracts are republished.

"The question of how animals are used in the laboratory has a long history of bitter controversy, accusation and denial, so that the smoke of battle makes it very difficult to find out what it is actually all about. Extremists on both sides, particularly those who have exploited so-called atrocities in the laboratory without hesitating to distort the truth, have so confused and disgusted the public that many people don't want to hear anything about it at all. I confess I wasn't anxious to myself, but I felt that I ought to try and find out whether under all that smoke there was any fire. I've come to the conclusion that there is.

"The battle began in England about a hundred years ago. Almost as soon as laboratory science was born, it was obvious that experiments on animals must of necessity involve inflicting considerable pain. In the minds of some people this became a matter of ethical—or even Christian—concern, while to others it seemed of trifling importance as long as the ends justified the means. The first efforts to do something about animal suffering in the laboratory came from two quarters. One was a group dedicated to the total abolition of any scientific use of animals. They called themselves anti-vivisectionists and continue to fight for that

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end today. The other group concerned included the most eminent scientists of the day: Huxley, Darwin, Jenner, and prominent members of the medical profession. In 1870 the British Association for the Advancement of Science and the British Medical Association appointed a committee to study 'means to reduce to a minimum the suffering entailed by legitimate physiological enquiries or any which will have the effect of employing the influence of this Association in the discouragement of experiments which are not clearly legitimate on live animals.'

"A year later the committee reported as follows:

"1) No experiment which can be performed under anesthetic ought to be done without it.

"2) No painful experiment is justifiable for the mere purpose of illustrating a fact already demonstrated.

"3) Whenever, for the investigation of new truth, it is necessary to make a painful experiment, every effort should be made to ensure success, in order that the suffering inflicted may not be wasted. For this reason, no painful experiment ought to be performed by an unskilled person . . . or in places not suitable to the purpose.

"4) Operations ought not to be performed upon living animals for the mere purpose of obtaining greater operative dexterity.

"From this report there grew Britain's Act of 1876 which gave to the Home Secretary authority to regulate the use of animals for scientific purposes. The law remains in effect to this day. It provides that experimenters must be licensed, must keep complete records, must have Home Office approval for specific experiments, and must cooperate with government inspectors charged with seeing to it that laboratory animals are in all respects treated as humanely as is practically possible. A proposed experiment that doesn't meet legal criteria can be forbidden by the Home Office. Similar laws are in force in Denmark, Sweden, Switzerland and Belgium.

"Even this control did not, however, satisfy the extremists among the anti-vivisectionists who damned it as an unholy compromise. Their agitation has been coupled with such immoderate and abusive attacks on science that scientific leaders who had favored control, and in fact worked to bring it about, became resentful of any lay interference. This is perhaps one of the prime reasons why in the United States today a large number of scientists are not only wary of any mention of the subject, but are inclined in turn to damn as crackpots any group urging legal regulation of laboratory work.

"In England the Act of 1876 ended the battle, although the shooting continued. In the United States warfare goes on, and so far the anti-control groups seem to have the upper hand. They have lobbied extensively and successfully against any proposed legislation that would open laboratories to humane workers or government control, and have succeeded in getting new state laws recognizing their right to obtain and use animals without interference.

"The problem is not a trivial one. Live animals are vital to the work that goes on in our hospitals, universities and commercial laboratories. Exact figures are unobtainable but undoubtedly many millions of vertebrate animals are used in laboratories yearly. This is not only a colossal number of living creatures, it is a colossal investment in equipment, in food, housing and attendant personnel. It means that a tremendous amount of money is involved. Wherever such huge sums can be affected by legislation, there is bound to be bitter and determined resistance from those currently in charge of spending them. Among the groups dedicated to repelling any invasion of the laboratory by government regulation are the American Medical Association, the Pharmaceutical Manufacturers Association, the National Society for Medical Research and trade organizations representing the laboratory animal industry—those who breed laboratory animals and manufacture equipment.

"Ranged against them are, on the one hand, the anti-vivisectionists, and on the other, middle-of-the-road humane groups who do not want to stop the use of animals but do feel that federal regulation like that in Great Britain would prevent unnecessary suffering. These last do not charge that scientists are necessarily willfully cruel, but point out that wherever economics and ethics conflict, as in child labor to

give but one example, regulation has been needed to ensure that ethical standards are always met.

"The extent of suffering and the necessity for it are, of course, key points in the debate. The moderate group does not claim that all laboratory animals suffer needlessly, but that many do. It charges that some suffering is of the absolute extreme, and can substantiate its charge by quoting from current medical literature. Technical journals do indeed describe procedures that strike the layman as absolutely hair-raising. Those favoring control claim that some of this misery could be abated or avoided. Some painful methods are employed, they say, simply because they are the cheapest and easiest, or because no one has troubled to find another way of accomplishing the same end.

"One of the spokesmen for the moderate group urging federal control is the Animal Welfare Institute of New York. It charges that, for reasons of economy, large animals are kept in small cages and remain in them for years, that for the same reason cats, dogs and even monkeys are sometimes kept in extreme discomfort, with nothing to lie on but metal mesh, even after surgery. Student surgeons may practice operations on the same animals over and over, until after six or seven operations the dog or cat is used up. Animals that have been operated on often receive no post-operative care. In some cases experimenters prefer to restrain animals instead of using anesthetics: that is, encase them in a holder or tie them down. Sometimes a drug is used to paralyze the muscles but not the nerves. There is carte blanche in pain infliction so that laboratories answer to no one for the necessity of such violent procedures as rolling animals in drums, breaking teeth and bones, inflicting burns and so on. Experiments may be duplicated needlessly in a number of institutions. Finally, for reasons of economy or simply because of poor administration, the routine handling of animals may be brutal, or they may be starved or infested with vermin.

"For several years now, the Animal Welfare Institute and other groups have proposed legislation, modeled on the British Act of 1876, requiring that all laboratories that use tax funds be licensed and inspected by the federal government. In joining to defeat the bill, the scientific groups reply that such control would hamper their work, cost a great deal of money, increase bureaucratic interference in education and in free enterprise, and in any case is not necessary as they do the best they can to be humane. This rebuttal is, of course, not stated so briefly, but a conscientious search of the arguments turns up very few points that couldn't be thus tidily summed up. Meanwhile the anti-vivisectionists also oppose such legislation on the same ground they have always held: namely, that it doesn't go far enough.

"To people who are sensitive about what happens to animals of any kind, the whole subject is a grim one. Furthermore, people mindful of what science has done to diminish human suffering have no wish to interfere with its progress. These two feelings—that the subject is too horrid to think about and that research deserves all possible support—combine to make many people avoid the question entirely.

"But surely the matter is not nearly as complicated as the hue and cry make it appear. The need for regulation is clearly as elementary as was the need for child labor laws, or the ordinary laws that prevent cruelty to animals in the community outside the laboratory.

"I believe it is possible to serve both science and decency, as has been done in Britain. A British scientist, Professor F. A. E. Crew, F.R.S., commented on the controversy with brilliant simplicity by saying, 'I do not think that just anybody should be allowed to do just anything with a living creature.' Dr. Albert Schweitzer has written, 'What does reverence for life say about the relations between men and the animal world? Whenever I injure any kind of life I must be quite certain that it is necessary. I must never go beyond the unavoidable.'

"It is hard to believe that conditions in the laboratories of the United States always meet that standard. It is even harder to see how the doctrine of 'never going beyond the unavoidable' asks too much of anyone, nor how it can be beyond the power and right of our society to enforce."

## THE BRITISH CRUELTY TO ANIMALS ACT OF 1876

### How it Works and Why it Protects Animals Without Hampering Science

The British Act of 1876 has incurred the hatred of anti-vivisectionists and of their opposite numbers, the extremists among scientists. Since extremists are often inclined to make their views known more emphatically and widely than their more level-headed fellows, far too much has been said against this sound, moderate, and thoroughly tested law and far too little for it. It is the purpose of this article to provide a brief description of its most important provisions and its method of administration so that readers of the INFORMATION REPORT can check allegations they may hear against it.

Every individual who uses animals has a license to do so and may expect an unannounced visit at any time from an experienced inspector who spends his full time in carrying out his duties under the Act. Inspections under the British Act are not the matter of casual whitewashing about which animal welfare workers have become justly cynical under some of our state dog procurement laws. AWI representatives have seen a New York State Health Department inspector approve (and even eulogize) the condition of a roomful of dogs, one of which had ripped open his abdominal incision so that vital organs emerged. Such "inspections" are worse than useless.

In direct contrast was the response observed by an AWI representative to the arrival of an inspector in a British laboratory whose animal care was irreproachable. The Animal Technician, a woman who had held this position for 25 years, was instantly concerned to be sure all was in order—which it obviously was.

What makes the difference? Most importantly, the British Act is a genuine piece of humane legislation. Unlike the procurement laws (such as New York State's Hatch-Metcalf Act) which were passed to get a cheap supply of laboratory dogs and cats, the British Act was passed for the purpose of protecting animals from needless suffering. For that reason it has the respect of scientists and laboratory personnel. Of equal importance is the calibre and training of the inspectors. All have medical qualifications and devote themselves fully to the difficult and demanding task of obtaining the most humane possible treatment of the animals in the laboratories assigned to their jurisdiction. They must read scientific papers, compare methods as they go from one institution to another, judge the character of their licensees in order to know where the most careful scrutiny is called for and where their work has, in effect, already been done for them. How different from the harried State Health Department veterinarian who has a whole roster of other duties that have priority in his schedule so that he never gives serious or concentrated attention to his inspections of laboratory animals.

Further, inspectors under the British Act carry out the requirements of a carefully drawn law which empowers the Home Secretary (for whom they act) to suspend or revoke the license of any person who contravenes the humane requirements of the Act. Further, an inspector is empowered to require the destruction of any animal which he finds to be suffering severely. This is part of the Pain Rule which states;

"a) If an animal at any time during the said experiments is found to be suffering pain which is either severe or is likely to endure, and if the main result of the experiment has been attained, the animal shall forthwith be painlessly killed;

"b) If an animal at any time during any of the said experiments is found to be suffering severe pain which is likely to endure, such animal shall forthwith be painlessly killed;

"c) If an animal appears to an Inspector to be suffering considerable pain, and if such Inspector directs such animal to be destroyed, it shall forthwith be painlessly killed."

The inspectorate is headed by a Chief Inspector who may be called upon by any of the inspectors in a difficult case. When a particular decision is too difficult even for him, the Advisory Committee, composed of experienced and distinguished scientists and medical men and a high court judge, can be consulted. They may rule for or against an experiment, or, like the inspectors, they may decide to limit the number of animals which may be used.

Sir Francis Walshe, a member of the Advisory Committee, has stated: "I regard the British practice as being in the best interests both of the experimentalists and of the animals they use." He has said, too, "A wide familiarity with the literature of experimental neuro-physiology leads me to think that in other countries where no such rational mode of control is used, not a few futile and unnecessarily painful animal experiments are carried out, by persons not always qualified to do them."

Under the British Act students are not allowed to do experiments on animals which could cause pain. Graduate students may be licensed under the Act to do research.

The places where animal experiments may be carried out are registered under the Act and, through registration of premises, the inspectors can require decent housing for the animals.

The British Act is a criminal statute, but only one person has ever been prosecuted under it: an individual who advertised a demonstration to the public of a painful experiment. This was in 1876, the year the Act was passed. Since that time, the licensing provisions of the Act have been found to be adequate to obtain compliance.

A system of certificates is used under the Act to distinguish between different kinds of experiments, the chief categories being: 1) Under anesthesia without recovery (requiring no certificate), 2) Under anesthesia with recovery, 3) No anesthesia employed, 4) Lectures and demonstrations under anesthesia without recovery. A certificate is also required for the use of dogs, cats or horses.

Typical statements describing planned experimental work under the second of the above mentioned categories (Certificate B) are:

"Obstruction of blood supply to limb bone by insertion of bone plugs or metal pins. Object: Study of the effects of curtailing the blood supply to the shaft of a long bone in stimulating epiphysial growth is expected to provide a suitable means of treatment in bone shortening due to congenital defects or following disease."

A second example: "Administration of pre-medication drugs and/or muscle relaxants to animals undergoing general anaesthesia. Object: Discovery of appropriate balance of anaesthetics and other drugs in creating optimum conditions for general anaesthesia in veterinary practice."

About ten days usually elapses between the receipt of such statements by the Home Office and receipt of its approval by the scientist. In the case of foreign scientists, they must have sponsorship, and it appears that failure to arrange for such official sponsorship has occasionally caused unusual delay and a correspondingly angry reaction.

Painless experiments, including all which are done on a non-survival basis under full anesthesia, may be done under license alone. Surgical operations are never done without anesthesia.

The British Act encourages scientists to plan experiments in the most humane manner possible. As Professor David Keilin, F.R.S., of the Molteno Institute, Cambridge, replied to a question whether the British system frustrates legitimate research: "Just the opposite, it compels the worker to plan and to carry out his experiments with more care. This greatly improves the quality of the research and is of benefit to the research worker himself."

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**EDITORIAL COMMENT ON BILLS TO PROTECT LABORATORY ANIMALS**

Bills to require humane treatment of laboratory animals are still awaiting action in both the U.S. Senate and the U.S. House of Representatives. The bills supported by the AWI are: the Clark-Neuberger bill (S. 533) in the Senate and the Ashley bill (H.R. 5430) and the Rhodes bill (H.R. 10138) in the House; these three bills are identical. Some recent editorial comment on this proposed legislation is reprinted below:

*The New York Times, March 18, 1964*

**NEEDLESS TORTURE OF ANIMALS**

In Washington and in Albany several bills bottled up in committees are designed to protect animals from the cruelty of man's hand or neglect. Animals that are to be slaughtered, or used in medical experiments, or in science laboratories or in classrooms can be saved from unspeakable pain and torture through proposed Federal and state law.

The Clark-Neuberger bill pending in the United States Senate and a companion bill in the House would insure decent treatment of laboratory animals, including adequate rest and exercise areas, proper feeding and sanitation. Where subjected to painful tests, animals would be anesthetized—now not always the case.

The existing Federal Humane Slaughter Act covers about 80 per cent of the animals slaughtered in this country; but the rest can be covered only by state laws. The McEwen-Feinberg bill in Albany would outlaw cruel practices such as shackling and hoisting of conscious animals. Another state bill would bar indiscriminate experiments with animals in high school classrooms. And the problem of homeless and starving dogs and cats — posing a health hazard in many communities, especially in New York City — would be covered by a law encouraging the spaying of domestic animals.

None of these bills is anti-vivisection legislation. Medical and scientific research must continue for man's health and benefit. But human carelessness and cruelty to animals are always present — and always unnecessary.

*The Christian Science Monitor, March 27, 1964*

**MERCY IS NOT DIVISIBLE**

The second session of the 88th Congress is well under way, and still no hearings have been held on the several regulatory bills designed to protect experimental laboratory animals from abuse, neglect and unnecessary suffering — bills which were introduced early in the first session. Similar bills have been introduced in former sessions of Congress, and have had a long history of delay.

Members of Congress and their constituents may be tempted to think that, in the face of global upheavals and serious domestic crises, bills relating to the treatment of animals are unimportant.

It is a false premise. No matter involving the public conscience is even relatively unimportant, and the treatment of animals in experimental laboratories is a matter of public conscience. Man's inhumanity to man is not so separate from his inhumanity to animals that he can afford to ignore the latter. Mercy is not divisible.

Of the 10 bills so far introduced only four are adequate in their provisions. They are the Randall bill (H.R. 4856), the Clark-Neuberger bill (S. 533), the Ashley bill (S. 5430), and the recently introduced Rhodes bill (H.R. 10138). All are regulatory, not prohibitory. The three last named are identical and are based on legislation which has been in force in Britain for years. The need for such legislation in America has already become a matter of authenticated public record. Voters, many of whose tax dollars are channeled to animal experimentation, should demand of Congress that hearings get under way without delay and that an adequate bill be favorably reported and enacted.

*Vineyard Gazette, (Edgartown, Mass.), March 27, 1964*

**THE QUALITY OF MERCY**

No more sanely wise and persuasive words could be written on the subject of animal experimentation than those of a New York Times editorial of Oct. 26, 1962:

"Many of the great achievements of modern medical research would not have been possible without experimentation on animals. Researchers must remain free to avail themselves of this invaluable technique; but all freedoms bear inherent responsibilities . . .

"Responsible researchers know that good care of animals is essential to valid experimentation. Nevertheless the thirst for scientific knowledge combined with human carelessness may sometimes result in laboratory conditions and procedures which do not meet the highest standards of medical research."

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**END OF MASS MONKEY SHIPMENTS IN SIGHT**

Humanitarians have been hoping for years that a new method of producing polio vaccine would be developed—one which would eliminate the need to import the tens of thousands of monkeys whose kidneys are used for growing the virus used in current vaccine manufacture. The capture and transport of these animals is subject to grave abuse and has caused incalculable amounts of suffering. The use of a method which would bring an end to this traffic would be a major humane advance.

When newspaper reports appeared on the work of Dr. Leonard Hayflick and his colleagues at the Wistar Institute in Philadelphia, indicating that an improved method is now available which 1) is safer for people and 2) substitutes a human diploid cell strain for monkey kidneys, we wrote to Dr. Hayflick for detailed information, which he very kindly supplied. In sending voluminous reprints from scientific journals, he commented on the transport of monkeys as follows: "We are very much aware of the terrible conditions of transport used with these animals. I can assure you that one of our major objectives is the ultimate utilization of human diploid cell strains for the purpose of preparing all human virus vaccine. This possibility is gathering increased interest and it is our view that, within a few years, all vaccine manufacturers will utilize this cell system for vaccine production. This, of course, will mean the cessation of the needless slaughter of these animals."

Dr. Hayflick has written the following article especially for readers of the AWI *Information Report*.

**USE OF HUMAN DIPLOID CELL STRAINS FOR VACCINE PREPARATION**

by LEONARD HAYFLICK, Ph.D.

Since no virus can multiply in the absence of a living host cell, the commercial production of human virus vaccines necessitates the use of large quantities of living animal cells. Although virus vaccines are still produced by growing the viruses directly in the intact animal, for example, vaccinia virus in calves, influenza and yellow fever viruses in embryonated chicken eggs; the renaissance of tissue culture methodology in the early 1950's and the recognition of the usefulness of this technique to virologists has resulted in incredible advances in the discipline of Virology. By utilizing cell culture techniques, it is possible to grow almost all human viruses in glass vessels containing bits of living tissue, nourished by a fluid medium.

With this development, it became possible to produce vaccines against a number of diseases. Chief among these was poliomyelitis. Since the polio virus will only grow in primate tissue cultures, the source of tissue for almost all poliomyelitis vaccine production is now the kidneys of rhesus, cynomolgous, or cercopithecus monkeys. Annually, tens of thousands of these animals are killed for this purpose. The kidneys are removed and enzymatically treated in order to separate the cells which are then placed in glass vessels and fed with a nutrient medium. These "primary cultures" are then utilized for the production of poliovirus and other kinds of human vaccines.

Although it had been known for decades that cells first placed into tissue culture vessels and called primary cultures were capable of continued division necessitating subcultivation to more and more vessels, it was felt that cells

allowed to grow for a number of generations in culture soon acquired properties similar to malignant cells. This information, derived by those workers experienced only with mouse tissue cultures, was extrapolated to include cells grown in tissue culture and derived from all other animal species. Of course, no one wants to prepare a vaccine in cells known to have malignant properties, thus the decision made 10 years ago that primary tissue cultures must be used for human virus vaccine production is still required by law.

It is now recognized that mouse tissue is peculiar in this regard and that although most mouse cells acquire malignant properties after some time in culture, this is certainly not true of the cells of other animal species, particularly human.

Techniques and theoretical concepts originally developed in our laboratory have shown that a small piece of human embryonic lung obtained from an aborted fetus can be grown in tissue culture continuously for approximately one year without acquiring properties of malignant cells. Such a "Human Diploid Cell Strain" derived from only one embryo three years ago and preserved in liquid nitrogen at  $-190^{\circ}\text{C}$  can be reconstituted and used to grow almost every known human virus.

It has been calculated that cells derived from this single human diploid cell strain called WI-38 can be used to grow sufficient virus to immunize the entire population of the world against many virus diseases including polio. In fact, WI-38 has been shown to support the growth of more human viruses than any other tissue culture system known. Indeed, by utilizing our strain WI-38, over 75 new human common cold viruses have been discovered, most of which do not grow in monkey kidney cells.

At a recent Symposium in Opatija, Yugoslavia at which 90 delegates from 18 countries discussed progress made with human diploid cell strains, it was reported that about 7,000 persons have received vaccines prepared in human diploid cell strains with results similar to or better than those obtained with vaccines prepared in monkey kidney.

In addition to the humanitarian value of stopping the slaughter of monkeys for vaccine purposes, other considerations are perhaps even more pertinent. Monkey kidney cells used for vaccine production have been found to contain 20 different hidden viruses which contaminate the vaccine product. Most of these contaminating viruses are killed during the usual manufacturing procedures. However, one such virus called S.V.<sub>40</sub> was recently found not to be killed but to survive even in the formaldehyde used to make the Salk-type polio vaccine. S.V.<sub>40</sub> was shortly thereafter found to produce tumors in baby hamsters and, last year, found to convert normal human cells in tissue culture to cells having properties of cancer cells. WI-38 which has been tested in many laboratories throughout the world does not contain any contaminating or hidden viruses — least of all S.V.<sub>40</sub>. It is, in our opinion, inexcusable that cells from monkey kidneys possessing these inherent dangers should still be required by United States' laws to be the only acceptable system in which poliomyelitis vaccine may be made. These dangers might be overlooked if no alternative were available but the utilization of human diploid cell strains can now offer an economical, scientifically, and ethically superior substitute for the monkey kidney tissue now used for human virus vaccine production.

## "ANIMAL MACHINES"

*Animal Machines*, by Ruth Harrison (Vincent Stuart, Ltd., London, 1964) is a shocking and thoroughly documented report on "factory farming" in England with emphasis on intensive methods of rearing chickens, calves and hogs, and of production of eggs by the "battery system."

Rachel Carson has written the preface. In it she notes: "Modern animal husbandry has been swept by a passion for 'intensivism'; on this tide everything that resembles the methods of an earlier day has been carried away. Gone are the pastoral scenes in which animals wandered through green fields or flocks of chickens scratched contentedly for their food. In their place are factorylike buildings in which

animals live out their wretched existences without ever feeling the earth beneath their feet, without knowing sunlight or experiencing the simple pleasures of grazing for natural food—indeed, so confined or so intolerably crowded that movement of any kind is scarcely possible.

"As a biologist whose special interests lie in the field of ecology, or the relation between living things and their environment, I find it inconceivable that healthy animals can be produced under the artificial and damaging conditions that prevail in these modern factorylike installations, where animals are grown and turned out like so many inanimate objects." Miss Carson concludes: "I am glad to see Ruth Harrison raises the question of how far man has a moral right to go in his domination of other life. Has he the right, as in these examples, to reduce life to a bare existence that is scarcely life at all? Has he the further right to terminate these wretched lives by means that are wantonly cruel? My own answer is an unqualified no. It is my belief that man will never be at peace with his own kind until he has recognized the Schweitzerian ethic that embraces decent consideration for all living creatures — a true reverence for life.

"Although Ruth Harrison's book describes in detail only the conditions prevailing in Great Britain, it deserves to be widely read also in those European countries where these methods are practiced, and in the United States where some of them arose. Wherever it is read, it will certainly provoke feelings of dismay, revulsion and outrage. I hope it will spark a consumer's revolt of such proportions that this vast new agricultural industry will be forced to mend its ways."

Of particular concern to American readers are the detailed accounts of "battery" hens, that is, hens confined to the smallest possible space, permanently caged in windowless structures, producing eggs as rapidly as they can until they are killed or (as some of them do) drop dead from exhaustion. Mrs. Harrison quotes often from trade journals: "'The sudden death of apparently healthy, strong pullets in battery cages is presenting research workers with a problem', stated a *Farming Express* reporter 14th December, 1961. 'The birds die of heart failure, but neither the cause nor the cure has been found.' Dr. W. G. Siller of the Poultry Research Centre, Edinburgh, thought that the birds were suffering from 'cage layer fatigue.' In the peracute form, he said (*Farmer and Stockbreeder*, 19th December, 1961) 'the birds drop dead.' In the acute form, 'there is prostration . . . the birds will die if neglected, but if hand-fed or nursed they may recover after several weeks or even months,' and this, the article points out, 'is, of course, uneconomical on a farm scale.'"

In the same chapter, we read: "A. C. Moore in *Poultry World*, 22nd November, 1962, was consulted to see if he could explain why flocks of pullets suddenly and for no apparent reason dropped from 70 to 20 percent production, and he commented that: 'pullets . . . geared to breaking point, become victims of stress factors. The more flocks of pullets I examine the more convinced I become that productivity is outpacing vitality. . . It is difficult to avoid the view that poultry stocks today are suffering from nervous tension, due to our attempts to convert them into egg machines.'

"Automatic feeding has another hazard for the bird: in his book, *Hen Batteries*, Dr. Blount warns that even with automatic feeding devices a careful watch must be kept to see that they are working properly and the troughs kept well filled. Otherwise, he says, 'it is possible for the birds to develop a frustration complex by which they fail to lower their heads to the trough, and semi-panic when they do not get any food. They paw at the cage front, and instead of lowering their heads to the feed they raise them higher and higher.'" Further, "All forms of cancer form a large proportion of mortality cases and Dr. Blount records that in one year alone an experimental unit recorded 'cancer of the heart, lungs, ovary, oviduct, kidney, leg muscles, liver and abdomen.'"

It is good to know that at least one country, Denmark, has outlawed battery cages. An R.S.P.C.A. leaflet reports: "According to a letter from the Danish S.P.C.A. in Co-

penhagen, the reasons which led their Government to pass such legislation were "the many complaints from animal lovers in the country; hens were sitting penned up, shelved and never allowed out; their feet were damaged by wires in the bottom of the cages and they could not wear down their nails. The veterinary police and veterinary health authorities recommended the legislation proposal sent by the different societies (for the protection of animals) to the Ministry of Justice. . . It might be apposite to stress that Denmark is one of the largest egg producers in the world and has made a system of free range or deep litter with access to free range in good weather, an economic and flourishing industry."

*Animal Machines* may be purchased in the United States from Samuel Weiser, 845 Broadway, New York, N. Y., or National Book Service, Ferndale, Washington. Price \$3.75.

## THE BIGGEST PESTICIDES DISASTER

reprinted from *Audubon Leader's Conservation Guide*, April 1, 1964

The biggest pesticides disaster to date was revealed March 19 in a cautiously worded press release issued in Washington by the U.S. Public Health Service. The release said "water pollution involving synthetic organic materials appears to be the cause of massive and continuing fish kills in the lower Mississippi drainage basin and its estuarine water in the Gulf."

The killer chemicals were identified as endrin and dieldrin, two of the more toxic and persistent of the chlorinated hydrocarbons. These insecticides have been widely used on Midwest farm crops, pastures and forests with the approval, and *in accordance with the directions*, of the U.S. Department of Agriculture and its county extension agents.

Residues of DDT and DDE also were found in the bodies of the dead and dying fish, along with two "unidentified substances" believed to be partially degraded forms of the insecticides. Because they knew their findings probably would be challenged promptly by U.S.D.A. officials, the Public Health Service investigators had separate analyses made independently by five research teams, including one private team of scientists.

Fish started dying by the millions in the lower Mississippi water in 1960 following the first heavy use of endrin on sugar cane crops. The die-off increased each winter since 1960, but it was not until this winter that scientific methods were perfected to identify and measure the chemicals held responsible. Aquatic biologists demonstrated years ago that endrin would kill fish if present in water in proportions of less than 1 part per billion.

Biologists of the Fish and Wildlife Service, cooperating in the study, ruled out disease, drastic temperature changes, shortage of dissolved oxygen, or the presence of pollutants other than pesticides, as possible causes of the fish deaths.

Food-chain poisoning apparently has hit other species. Louisiana ornithologists have been alarmed for several years by the decline of the brown pelican. A writer for the Franklin (La.) *Banner-Tribune* told of white cranes (egrets) dying by "countless thousands." A reporter for the *New York Times*, following up on the press release, interviewed commercial fishermen and trappers who told of seeing dead mink, otters, turtles, geese, cranes, crabs, shrimp and small birds, in addition to great drifts of dead fish, in the Louisiana bayous.

Connecticut Senator Abraham Ribicoff, who has been conducting hearings in Washington on the pesticides problem, told the Senate March 27 that his Subcommittee would soon start looking into the Mississippi disaster.

The *New York Times* said editorially: "The questions posed are of such magnitude that they deserve investigation and resolution with maximum dispatch. . . . Meanwhile, the Department of Agriculture, most reluctant of all federal agencies to move vigorously against potentially dangerous pesticides, owes it to the public to put into full effect the recommendations of the Science Advisory Committee's report of last year."

## EDITORIAL COMMENTS

(Continued from Page 1)

Documentation of abuses due to negligence, needless cruelty and irresponsibility has been accumulated in shocking volume by the Society for Animal Protective Legislation and other groups and individuals.

The Clark-Neuberger, Ashley and Rhodes bills, now pending, and still waiting—inexcusably overlong—for hearings, are moderate proposals similar to British legislation which, in effect for many years, has not hampered research in England in any way whatever. They are not anti-vivisection measures, nor are they sentimental or unrealistic.

On the contrary, they will forestall extremist and fanatic legislation, and they embody the humanity and responsibility of all people who believe in humane animal experimentation and oppose inflicting unnecessary pain on animals.

The medical profession does itself a disservice in exerting its lobby against such moderate and humane proposals, and in misrepresenting their character and their effect; and the Surgeon General of the United States has much to answer for in lending his influence to delay. Humanity will prevail, and if regulation of animal experimentation does not come reasonably and sanely it will come in a surge of emotion.

Every citizen can take part in this advancement of civilization simply by writing to his congressman and senators urging their support of the Clark-Neuberger (S. 533) and Ashley (H.R. 5430) and Rhodes (H.R. 10138) bills.

*The Fresno and Sacramento (Calif.) Bee*, March 17, 1964  
END GROSS CRUELTY

It simply is fantastic that congress has dawdled so long on legislation designed to require adequately humane treatment in experimentation on animals.

Year after year sponsors have introduced bills in the two houses and year after year there have been lengthy hearings but little more.

Now the congress is considering identical measures, the Clark-Neuberger bill (S533) in the senate and the Ashley bill (HR 5430) in the house, and if the lawmakers could but sense the growing indignation in the public mind they would act.

One way to urge this action is to write, supporting the legislation.

The crass unconcern for the animals under experimentation in some laboratories is documented, unquestioned. It is proper that we use animals for experimentation. Human health and medical progress are involved. But does not society owe the animals at least the simple humane protections?

Still one more area of lack of concern is pointed out in another humane measure introduced by Congressman George M. Rhodes of Pennsylvania who wants to extend to trucks the 28 hour limitation imposed now on railroads in the feeding and watering of stock.

This measure too is important. Yet trucking interests, concerned more with mileage than humaneness, have defeated reform proposals. No animal should have to undergo transport without food and water for more than 28 hours, whether shipped by rail or truck or go cart. And congress should so state.

*Pasadena (Calif.) Star-News*, February 27, 1964  
HUMANE TREATMENT BILLS

We have declared our support for federal legislation guaranteeing humane treatment of animals on more than one occasion in the past, and expect to continue to do so until something effective has been accomplished in this field.

Identical bills sponsored by Senators Joseph S. Clark, Maurine Neuberger and Stephen Young, and by Rep. Thomas L. Ashley are now pending in both houses of Congress. The passage of such legislation has been impeded not because of any desire to inflict or defend cruelty to animals but because of resistance to controls of any kind.

There are people who are opposed to the use of animals in research altogether, but this is an extreme view. We regard this work as indispensable. At the same time, experience in England for the last hundred years has shown that it can be carried on humanely in every instance.

The least men can do for the animals that are sacrificed to help cure the ills of humankind is to see that they are maintained comfortably and are spared both the pain and the discomfort that can be prevented.

*Youngstown (Ohio) Vindicator*, March 11, 1964  
ANIMAL PROTECTIVE BILLS

Medical annals are full of animal heroes which have substituted for human beings in essential experiments extremely dangerous to life. Their continued use in necessary experiments is needed to insure medical progress.

At times, however, the delicate balance between required experimentation and needless cruelty and pain for the animals involved, is lost. Callousness and brutality in the handling of animals is not known to be widespread but any at all is intolerable.

Currently, there is no legal way to prevent mistreatment of these animals. The omission could be corrected by bills before Congress, the Clark-Neuberger bill before the Senate and the identical Ashley and Rhodes bills pending before the House of Representatives.

The Society for Animal Protective Legislation points out that all these bills are based on the British Act which has been in effect 83 years and has the approval of scientists working under its provisions.

Basically, the bills before Congress would provide for inspectors working directly from the office of the Secretary of Health, Education and Welfare, to supervise all animal experiments in all institutions that receive any federal funds. There would be unannounced inspection of laboratories and their records, licensing of scientists using live vertebrate animals in experiments, the requirement of painless death for animals suffering severe and enduring pain; humane care and treatment and prohibition of students using animals in painful experiments.

There is no excuse for needless cruelty in animal experiments. Congress should act as quickly as possible to see that it is prohibited.

The AWI has been asked for examples of experiments and tests in which invertebrates, single-celled animals, tissues, or organs are used in place of living, vertebrate animals. The following excerpt from a paper, "The Use of Laboratory Animals for Drug Testing" by Charles G. Durbin, V.M.D. and Jane F. Robens, D.V.M., Division of Veterinary Medicine, Food and Drug Administration, gives three such ideas.

"Spiders were used by Christiansen (1962) to learn specific actions of psychotropic and hallucinogenic drugs more easily than in man where situations contribute so highly to results. By measuring both the web-size and regularity of angles of the spider's webs, he was able to differentiate between mescaline and psilocybin.

"Protozoa could be effectively utilized in studies of enzyme function. In protozoa, the primary functions of the hormones may not be obscured as they are in metazoa where the tasks of coordinating cells and organs have been super-imposed on the original intra-cellular function (S. Hutner, 1955).

"Use of isolated cell and organ systems from laboratory animals may help to eliminate complicating factors from experimental results. For example, isolated eyeballs may be used for the quantitative evaluation of autonomic drugs and blocking compounds. The usual *in vivo* complication producing undesired pharmacologic and physiologic effects modifying pupil diameter and drug distribution are avoided (W. Beaver, 1962). The eye of the squid has many similarities to man and could well be utilized in the study of ophthalmic drugs."

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### TWO MAJOR ANIMAL PROTECTIVE BILLS INTRODUCED BY REP. RHODES

Recognizing two glaring omissions in federal law protecting animals, Congressman George M. Rhodes (D. Pa.) has introduced two major humane bills in the United States House of Representatives. They are H.R. 10138, to require humane treatment of animals used in experiments and tests, and H.R. 10026, to require humane treatment of livestock transported by truck from one state to another.

Livestock travelling by train are protected by a federal law passed in 1906 which provides for feeding and watering after 28 hours en route. Crippling and death of livestock moving by truck is much greater than by rail, but an attempt to extend the 28-hour law to trucks, which now carry the vast majority of livestock in interstate commerce, was defeated by trucking interests a decade ago. As a consequence, there are no humane controls on the shipment of most lambs, calves, cattle and swine, and a large proportion are abused.

Legislation to prevent abuses in the care and treatment of experimental animals is even longer overdue. The bill introduced by Congressman Rhodes is based on the time-tested principles of the British Act of 1876 which has the support of British scientists and non-antivivisectionist humanitarians because it prevents cruelty without hampering research.

"I am pleased to join with Senator Clark and Senator Neuberger and my colleague in the House who have introduced an eminently sane and reasonable humane treatment measure," Congressman Rhodes said. "My bill, H.R. 10138, is identical to Senator Clark's proposal, S. 533. Far from placing obstacles in the path of trained medical researchers, this legislation, by safeguarding against unregulated performance and needless cruelty and neglect, will aid scientific research.

"My other bill, H.R. 10026, would extend existing 28-hour law safeguards to the interstate transportation of animals by motor vehicles."

### OFFICIAL DIRECTIVE AGAINST CRUELTY IN SCIENCE TEACHING

A recent bulletin issued by the State Superintendent of Public Instruction of the State of Washington draws attention to the problem of cruelty to animals in high school science classes and directs superintendents and principals throughout the state to prevent it. The bulletin states:

State of Washington  
SUPERINTENDENT OF PUBLIC INSTRUCTION  
Olympia  
December 3, 1963

#### BULLETIN NO. 152-63

TO: Superintendents and Principals  
FROM: Louis Bruno, State Superintendent of Public Instruction  
RE: Humane treatment of experimental animals

Modern science education provides the student with numerous investigative experiences, some of which may involve the use of experimental animals. Teachers throughout the State of Washington are required to make every effort to avoid activities which may be interpreted by students as cruel or inhumane treatment of such animals. All instructors are urged to exercise genuine discretion in determining how living animals can be used most constructively in the course of laboratory investigations. Many sensitive youngsters can very readily form lasting impressions and prejudices which are not at all desirable if their science classes include callous treatment or neglect of living things.

There is a Washington State Law which states that "Not less than ten minutes each week must be devoted to the systematic teaching of kindness to not only our domestic animals but to all living creatures." It is not sufficient to devote an isolated ten minutes per week to this end. A general philosophy of thoughtfulness and consideration for living things should be incorporated and repeatedly emphasized in all science teaching.

Sadistic practices have no place in the classroom and are punishable by law as misdemeanors. The instructor should make every effort to make perfectly clear to his students the necessity for providing adequate quarters and proper care for all live animals used in the public schools. Scientific insight and appreciation of the highest order can be cultivated through the respectful and considerate treatment of the many interesting living organisms which have such an important place in the modern science laboratory.

Please bring this bulletin to the attention of all members of your teaching staff.

DIVISION OF CURRICULUM AND INSTRUCTION  
JAMES M. GARNER  
Supervisor of Science Programs

### ANIMAL WELFARE INSTITUTE

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*The New Scientist*, May 28, 1964, published the following interesting article correcting the untrue statements on the British Act which were recently circulated to American scientists by the National Society for Medical Research. For comments by Major Hume of UFAW, see page 3.

### U.S. vivisection battle: a British denial

"VIVISECTION" is one of the most emotive words in the English language. In Britain it generates periodic waves of protest from those who believe that the present Home Office regulations are insufficiently strict. In America it provokes outbursts from societies who allege that research is hampered if not hamstrung by the generally-accepted method of British control over experiments on live animals. The latest propaganda from the U.S. National Society for Medical Research, an organization with headquarters in Rochester, Minnesota, seems to give a very misleading picture. Almost everything it says about the situation in Britain can be challenged.

Under the bold headline, "British Re-Evaluate Act of 1876", the society has published a statement which begins:

"A committee recruited by the British Home Office to re-evaluate the Cruelty to Animals Act of 1876 has proposed sweeping alterations to facilitate 'smoother administration and the avoidance of delays which are sometimes irritating'. The departmental committee was comprised of representatives of the Royal Society, the Royal College of Surgeons, the Physiological Society, the Pharmacological Society and the Nutrition Society. Also represented were Fellows or Members of the Royal College of Physicians, the Pathological Society, the Society for Experimental Biology, the Society for General Microbiology and the British Veterinary Association. The Anatomical Society supported these views as well."

Among many changes attributed to this body, it is said that the new proposals "would allow students to conduct experiments without licence under supervision from licence holders, and would allow advanced students to apply for full licenses of their own. It would allow fuller use of animals for demonstrations in teaching; abolish (some) requirements for anaesthetisation . . . and refer all matters of controversy to the Departmental Committee which would gain permanent status."

The facts of the situation are that the Littlewood Committee appointed by the Home Office is now considering the present control over experiments on animals and also "whether, and if so what, changes are desirable in the law and its administration." It has not proposed "sweeping alterations" or anything else. It is still taking evidence and the Home Office confirms that it has not issued any report whatsoever and is unlikely to do so until at least the end of the year. Moreover, the committee is not comprised of representatives of various societies. The members sit in their private capacities. In short, the terms of reference and composition of the committee, as described in the American statement, and the recommendations it is alleged to have made appear to be fictitious.

In the United States, where there are no controls over experiments on live animals, even a schoolchild can perform drastic operations in the classroom. Bills based on British experience and designed to limit cruelty and ensure that nobody without experience can conduct experiments are now before Congress, but they are running into heavy weather largely as the result of propaganda of this kind.

### RACHEL CARSON

One of the few great writers and humanitarians of this century, Rachel Carson has left a vast vacant space by her death. Even casual readers of the daily press are aware of the country's loss, and to the Animal Welfare Institute which she served as a wise advisor for the past four years, her departure leaves an irreparable void. Her calm, unswerving courage, characterized by the light laugh with which she greeted the outrageous and sometimes ridiculous dishonesty of opponents, her stoicism in the face of illness and suffering, and, most of all, the constancy of her humanness should never be forgotten.

Though she is known for an all-embracing effort to protect millions of living creatures, she could take equally intense interest in one ailing person who wrote to her about the pesticide-caused death of a much loved cat—and received sympathy and good advice from her. By the same token, a high school boy, wanting to test pesticides on living mice as a science project, received her firm discouragement accompanied by well-marshalled facts and reasons why untrained youths should never inflict suffering on animals, no matter how worthy the intended aim might be. She never left the individual cases that came to her attention to take care of themselves, but devoted to them the same careful thought and genuine feeling that made her formal writing famous.

She was a staunch supporter of the Clark-Neuberger bill to require humane treatment of experimental animals. Her testimony, read into the record of the 1962 Congressional hearings by the Chairman, was direct and simple: "When animals are maintained under conditions of poor housing, lack of exercise, exposed to prolonged suffering and shock, the results of experiments can only be misleading. In the interest of scientifically accurate results, it is necessary that test animals be maintained in a state of general well-being. I support this bill also for moral and humanitarian reasons."

The Hon. Stuart Udall, Secretary of the Interior, has written an unusually fine appreciation as a friend and admirer of her work. It was first published in *The Saturday Review*. With his kind permission, it is reproduced below.

### THE LEGACY OF RACHEL CARSON

by STEWART UDALL, U.S. Secretary of the Interior

"Hurt not the earth, neither the sea, nor the trees . . ."

—The Book of Revelation.

There were, or so I would like to suppose, intimations of a new American maturity in the life and death of Rachel Carson.

In the success of *Silent Spring* was the hope that those who truly care about the land have a fighting chance to "inherit" the earth. That the pen of one so unassuming should have such an impact on national events was remarkable, and a heartening sign to conservationists everywhere.

An admirable sense of proportion fittingly marked the reporting of her passing: front-page obituaries, warm tributes, editorials like that of the *New York Times*, which called her "one of the most influential women of her time."

Those of us privileged to know Rachel sensed the strength concealed within her Emily Dickinson gentleness. She did not seek controversy, but when her research turned up unpleasant truths she took them into the market place, oblivious to the scorn of her critics. We who were sometimes in the fray with her marveled at the quiet way she

held her own against the amassed experts of industry, as she presented her brief against the contaminators effectively, with modesty and graceful indignation.

Why, one might ask, did Rachel Carson—who won no great prizes and led no crusades—attract such attention? Why did the influence of this gentle woman ripple so far?

I suggest two answers. The qualities of mind and spirit, revealed in her books about the sea, caught and held us. She introduced us to the mysterious world of water, combining the scientist's eye and the poet's sense. Who can forget this passage from *Under the Sea Wind*?

"To stand at the edge of the sea, to sense the ebb and the flow of the tides, to feel the breath of a mist over a great salt marsh, to watch the flight of shore birds that have swept up and down the surf lines of the continents for untold thousands of years, to see the running of the old eels and the young shad to the sea, is to have knowledge of things that are as nearly eternal as any earthly life can be."

And the lyric tone of her prose, the insights she drew from her research, her clear commitment to nature's scheme of things made her a memorable teacher. There was always, there to admire in her work, the effortless way with which she bridged the gap between science and the humanities.

The other answer must relate to the creed that caused Rachel Carson to write *Silent Spring*. During her Congressional appearance a year ago she stated her basic conviction: "I deeply believe that we in this generation must come to terms with nature."

*Silent Spring* was called a one-sided book. And so it was. She did not pause to state the case for the use of poisons on pests, for her antagonists were riding roughshod over the landscape. *They* had not bothered to state the case for nature. The engines of industry were in action; the benefits of pest control were known—and the case for caution needed dramatic statement if alternatives to misuse were to be pursued.

Was it not understandable that one who was trained by science to respect the frailness of the fabric of life and was infused with a naturalist's concern for all living things should view the most poisonous of the pesticides with more alarm than a farmer?

*Silent Spring* was a "popular" book because it crystallized the concern of so many. Researchers who were nursing doubts, conservationists who were alarmed by fish and wildlife losses, and concerned Congressmen found a catalyst for conviction in Miss Carson's book. Connecticut's Abe Ribicoff emerged as the *Silent Spring* Senator, and he convened his hearings by saying: "Miss Carson, on behalf of the Committee we certainly welcome you here. You are the lady who started all this."

A steady stream of mail descended on the nation's capital, and a year ago Dr. Jerome B. Wiesner, President Kennedy's Science Advisor, vindicated her when he spoke for a panel of scientists and stated that the indiscriminate use of the worst poisonous chemicals was "potentially a much greater hazard than radioactive fallout."

What, then, is the legacy of Rachel Carson?

She alerted us to the subtle dangers of "An Age of Poisons." She made us realize that we had allowed our fascination with chemicals to override our wisdom in their use. If serious doubts existed about the harmful side effects of a pesticide, to her the only prudent answer was in favor of the web of life.

To those already embroiled in the conservation crusade, the reception accorded *Silent Spring* was a sign of sanity. It revealed an unsuspected sensitivity in America to values that have been neglected in the unthinking onrush of "progress."

Whatever her immediate impact on conservation controversies of the Sixties, it is already clear that she has helped us develop a land ethic suitable to a civilization that aspires to greatness.

She also believed that those who put short-term profits above the long-term needs of other generations had to be resisted, and her eloquence made her a formidable foe of the short-sighted and the careless.

Rachel must have taken secret satisfaction in the thought that the response to *Silent Spring* demonstrated that once the bird-watchers and wildlife lovers of the world united, they could prevail in many of the "thousand little battles" for conservation across the land.

We were all diminished by the premature passing of this woman. A new book she had planned to call *Help Your Child Wonder* will go unwritten; but the spirit of *Silent Spring* is itself a large legacy.

Rachel Carson quoted poetry to make her points. Our epitaph for one who gracefully blended a scientist's dedication to truth with a poet's feel for nature would be these lines from Keats:

Beauty is truth,  
Truth beauty,—  
That is all ye know on earth,  
and all ye need to know.

## DEMULSIFIER CAN PREVENT 95% OF POLLUTION OF THE SEA BY OIL

Three major oil companies have reported their adoption of a method which can eliminate 95% of sea water oil pollution from ocean going tankers, according to the Standard Oil Company. Shell International Marine Ltd. and British Petroleum Tanker Co., Ltd. announced their plans in London at the same time as the announcement was made in New York.

According to the *New York Times*, June 17, 1964, "The measures call for a ban on discharging oily wastes overboard by any of the company's American or foreign flag tankers, and treatment of wastes aboard ship with a special demulsifier—a chemical that separates the oil from salt water."

The article further pointed out that the seawater ballast in the cargo tanks has ordinarily been pumped overboard at sea before taking on a new cargo, thus causing oil pollution. "Now that ballast water is treated with the demulsifier, the oily residue, about 60 to 70 tons on an average voyage, is then retained on board, and either disposed of ashore or later mixed with succeeding cargo."

Adoption of the new procedure by all oil transport vessels should be urged by humanitarians throughout the world. Oil pollution of the sea brings about a cruel, slow death by starvation of uncounted thousands of sea birds, and now that a method is available and easy to put into effect (it requires no special or additional shipboard equipment), it should be adopted at once throughout the industry. "The twentieth century Black Death" as oil pollution has been called should be brought to an end immediately.

## NEW INSTITUTE ADVISOR

The advice of humane experimental biologists is essential to the conduct of the Institute's work for laboratory animals, and we are pleased to announce that Dr. F. Barbara Orlans who holds a B.Sc. degree from Birmingham University, and M.Sc. and Ph.D. degrees in physiology from the University of London, England, has joined the Advisory Committee of the Animal Welfare Institute. Dr. Orlans spent four years doing research in the Laboratory of Chemical Pharmacology, National Heart Institute, National Institutes of Health at Bethesda. She has published a number of papers in both the American and British Journals of Physiology, the Journal of Pharmacology and Experimental Therapeutics and others.

Dr. Orlans' experience in scientific work under the British Act of 1876 and later in the United States gives her a broad understanding of how legislation affects the welfare of experimental animals and the attitude of laboratory personnel. As the mother of two young sons, she has a personal interest, too, in science teaching in grade school and high school, and, elsewhere in this INFORMATION REPORT, is Dr. Orlans' account of improper experiments recently shown at the National Science Fair.

In a letter to the editor of *Science*, published April 24, 1964, Dr. Orlans wrote: "If the British experience affords a guide, the provision in the Clark-Neuberger bill for unannounced inspection of animal quarters should help con-

siderably to establish reasonable standards of housing. Under the British system, institutions are visited by inspectors (all of whom are M.D.'s,) an average of three times a year, although, in fact, reputable laboratories may be visited infrequently while borderline ones are inspected many times each year. The inspector, of course, must have authority to ensure that his recommendations are carried out, and this is where voluntary accreditation and similar schemes fall down. Admirable though voluntary schemes may be for responsible institutions, they leave untouched precisely those places where improved standards are most needed.

"In the hope of stemming effective legislation, many groups have recently advocated voluntary codes for humane treatment of animals. This rush of activity suggests the need for such codes. Unfortunately, many scientists seem to regard a college degree as a certificate not only of professional standing but of moral integrity, the holder of which is henceforth beholden to no man for his actions. The infliction of pain on animals, like the infliction of pain on humans, involves moral and social standards which cannot be left solely to individual judgment but should, in a civilized society, also be governed by law.

"Individual licensing of scientists, another provision of the Clark-Neuberger bill, has proved most successful in England for over 80 years. In my own experience as a Ph.D. student in physiology at London University I found that the licensing laws had a beneficial effect upon research, particularly among young scientists. Like good research technique, good standards of animal care must be learned, and they cannot be learned unless they are first defined and, where necessary, enforced. The cordial relations between the Home Office and the British scientific community are founded on a mutual interest in maintaining humane standards for laboratory animals, standards under which fruitful scientific work has not been impaired and under which, indeed scientists are protected from criticism or prosecution by uninformed or mischievous persons."

#### ***New York Times Editorial, April 8, 1964*** **EXCESSIVE CONTROL OF PREDATORS**

Secretary of the Interior Udall's advisory committee on wildlife management has sounded a long-needed warning about the excesses and errors of the Government's branch of Predator and Rodent Control. Among the errors cited by the committee is the dangerous aerial broadcasting of grain treated with sodium fluoroacetate, a deadly poison known in the trade as "compound 1080." This practice was held responsible for the death last year of two birds from the tiny flock of California condors that is the last survivor of its kind on earth. Many other valuable animals, including rare grizzly bears and mountain lions, have been killed inadvertently.

Wolves and other wild beasts are no longer the threat to domestic herds they once may have been. Indeed, the true wolf is almost gone in the United States outside of Alaska. The coyote still harasses sheepmen in some places, but this is a problem that could be handled effectively and at far less cost by concentration of efforts in local areas. Secretary Udall's committee pointed out that "control" operations now extend into areas where there are no sheep or other valid justification.

Congress must share the blame for the outsize growth of the predator control agency, which now employs more than 600 trappers and poisoners in the Western states. For the most part, Congress has closed its eyes while its appropriation committees annually doled out larger funds at the request of the wool growers' association and as a result of indirect lobbying by the predator control agents themselves. Certainly the problem does not require the present army of Government hunters. Here is a fine chance for some of that governmental economy the President has been talking about.

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#### **MEDICAL RESEARCH IN THE U.S.A.**

(reprinted from *The Lancet*, June 20, 1964)

Sir,—The National Society for Medical Research, which is leading the campaign in the United States against legis-

lation based on British experience under the Act of 1876, has published a statement ("Events Affecting Research Administration", April, 1964) to the effect that a Government committee composed of representatives of specified scientific bodies "has proposed sweeping alterations" in our law. As your readers will know, the Littlewood Committee of the Home Office comprises individuals, not representatives, has issued no recommendation, and is unlikely to report before the end of the year.

I have been allowed to read a good deal of the evidence tendered to the Littlewood Committee by various organizations, including the Research Defence Society, and it is clear that there is a considerable amount of unanimity among scientists, including the scientific advisory committee of UFAW, as to the basic soundness of our law and as to a number of minor details in respect of which it needs tidying up in the light of so many years of experience. The N.S.M.R. statement affords yet one more example of the reckless unreliability of the propaganda of which it forms part.

C. W. HUME  
Secretary General  
Universities Federation for  
Animal Welfare

#### **UNWARRANTED PAIN INFLICTION AT NATIONAL SCIENCE FAIR**

by F. BARBARA ORLANS, Ph.D.

The 15th National Science Fair held on May 7th and 8th at Baltimore exhibited work of high school children aged 15-18 from all parts of the country. Of the ninety-eight entrants in the medical section about half were objectionable on the ground that vertebrate animals were subjected to painful procedures. Producing cancer in mice, rats and birds is a common practice in high schools today and there were many such exhibits. One group of rats which had been given cancer then had their adrenals or ovaries removed. Some mice were centrifuged, in one case until they were paralysed. A project on "The Crippling Effects of Caffeine Alkaloid" described how injected mice became stunted and produced malformed offspring. In order to keep rats awake for extended periods they were revolved for over three months in a drum. Also on show were mice with skin grafts on their backs and no spleens. A boy of sixteen inserted brain electrodes without aseptic technique and the rats that survived two weeks post-operatively were then electrically stimulated.

This work represents a needless infliction of pain. Scientific knowledge is not advanced in any way and at best the student gains only a certain technical practice which could be acquired just as well on lower forms of life. Many such projects performed on invertebrates or plants are shown at science fairs and they lack neither skill nor inventiveness. When the student is well along in his scientific studies and can produce genuinely useful results, then it may at times be necessary for him to inflict pain on higher forms of life. A moral code for high school biology work should provide that no vertebrate animal is subjected to any procedure which interferes with its normal health or causes it pain.

It is regrettable that Science Service which administers these fairs and the medical associations which present the prizes should sanction inhumane work. Biology teachers can lead the way by encouraging their students in work such as that suggested in "Humane Biology Projects." State laws are required to prohibit the use of vertebrate animals for painful experiments by high school children. A test case will be heard this month in a New Jersey court in which a humane society has brought action against the Board of Education charging the Board that chickens were illegally mutilated by a high school student who injected them with cancer virus for exhibition in a science fair. In adopting more humane standards in high schools, the student as well as the future scientific community would benefit by justifying more critically every experiment in which pain is inflicted.

## HUMANE SLAUGHTER DECREED IN FRANCE

On the sixteenth of April a decree was issued by the Prime Minister together with the Minister of Agriculture, the Minister of Justice and the Minister of the Interior which requires that livestock be rendered unconscious prior to shackling, hoisting and bleeding. The law applies to cattle, sheep, goats, pigs, horses, donkeys and mules. An exemption from prior stunning is made for ritual slaughter with the proviso that, within one year, appropriate means to avoid bruising of the animal just before the cut must be provided.

The decree also prohibits the use of goads or other brutal methods. Specifically prohibited is the crossing and tying of animals' back legs to suspend them before they are unconscious.

Humane stunning and anesthetizing devices will be approved by a committee made up of professors of veterinary medicine, veterinary inspectors, an engineer and a representative of animal protective organizations.

According to Mme. Jacqueline Gilardoni, President of the Oeuvre d'Assistance aux Bêtes d'Abattoirs, the decree goes into effect immediately but some months will be required before all slaughterhouses will be organized to carry out the requirements.

Associated with Mme. Gilardoni's group is the Club du Jeune Ami des Animaux which enlisted the active assistance of Brigitte Bardot in 1962. Jean-Paul, the teenage president of the group, went to work in a slaughterhouse in order to acquaint himself fully with all that the animals underwent. His letter to Miss Bardot led to her appearance on television in behalf of the animals of the abattoir which was followed by tens of thousands of letters calling for an end to needless cruelty in French slaughterhouses. The April decree marks the successful result of public demand.

## NEW YORK PUBLIC LIBRARY EXHIBITS AFRICAN HUMANE POSTERS

From July sixth to August 28th, the Little Gallery of the Hudson Park Branch of the New York Public Library will display posters painted by African school children and entered in the contest sponsored by the Humane Education Institute of Africa, whose headquarters are in Dar es Salaam, Tanganyika. Kindness is the theme, and it is portrayed in a large variety of ways towards animals and towards people who, by reason of age or infirmity, are in need of help. Ten African countries are represented in the exhibition which has been viewed in Dar, in Toronto, Canada, and in Boston, Massachusetts prior to its New York showing.

The Little Gallery is located at 10 Seventh Avenue, South, and summer hours are: Monday and Wednesday, 12:30 - 9:00 P.M., Tuesday 9:00 A.M. - 6:00 P.M., Thursday and Friday 12:30 - 6:00 P.M. Closed Saturday and Sunday.

## STAFF APPOINTMENTS

Early in the year, Mrs. Robert Dyce joined the staff of the Animal Welfare Institute as Assistant to the A.W.I. Laboratory Animal Consultant. Recently Miss Estella Draper retired from the position of Executive Secretary which has now been filled by Miss Alexandra Peschka. Mrs. Paul Lewis has been appointed Technical Secretary.

## NEW ENGLAND SUPPORT FOR S. 533

At their recent annual meetings the Massachusetts Federation of Humane Societies and the New England Federation of Humane Societies both reaffirmed their support of the Clark-Neuberger (S. 533) bill and the Identical bills in the U.S. House of Representatives, the Ashley (H.R. 5430) and Rhodes (H.R. 10138) bills, to require humane treatment of experimental animals.

*Our Dumb Animals*, the monthly magazine of the Massachusetts SPCA and the American Humane Education Society editorialized:

### Humane Treatment of Experimental Animals

There are, at this writing, at least ten bills before Congress which seek to regulate, supervise, and control the use of live, vertebrate animals. This Society supports the Clark-Neuberger Bill (S. 533) simply because we believe it is the best one offered.

Members and friends of our Society should express their views on this legislation by writing to their respective Representatives and Senators in Washington, D.C.

The first step in obtaining this important and much needed legislation is for public hearings to be held in Washington, and this matter is being worked on by many groups interested in the legislation.

Our friends, however, should understand that with so many bills before Congress, what ultimately is voted on may well be a composite bill. We hope it will be a strong bill, and to be considered a strong bill, any legislation proposed *must* contain the following basic six points:

- 1) Unannounced inspection by qualified, full-time inspectors with access to animal quarters, laboratories, and records of animal use.
- 2) Individual licensing by governmental authority of all scientists desiring to use live, vertebrate animals, with the right to remove said licenses from persons responsible for inhumane treatment.
- 3) Pain-curbing provision that animals suffering severe, enduring pain must be painlessly killed instead of being allowed to linger in agony or being used over again. Failure to comply with the above automatically gives the inspector the right to destroy the animals painlessly himself.
- 4) Humane care and housing, including normal exercise, comfortable resting places and adequate food and water for all animals.
- 5) Student work, as distinct from research conducted by qualified scientists, must be painless.
- 6) Records that include a brief statement of what is to be done to the animals and why, identification of animals and eventual disposition, and a brief annual report.

No less a person than Dr. Albert Schweitzer has said, "If you pass such a law in the United States, it will have important meaning for the world."

Our friend Henry Hough, editor and publisher of the *Vineyard Gazette*, stated the case exactly as we feel about it. "It is urgently needed, reasonable legislation without which the United States can hardly consider itself a civilized nation." E.H.H.

*Editorial by Dr. Eric H. Hansen, President and Director of M.S.P.C.A. and A.H.E.S.*

## ANIMAL WELFARE INSTITUTE

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September-October, 1964

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## MICHIGAN STATE LAW ENFORCED

The Albert Schweitzer Award for 1964 will be made to Patrolman John Mobley of the Detroit Police Force. Mr. Mobley has told his experience in a concise statement: "At about 9:30 P.M., on Thursday, July 9, 1964 while working Sct. 1-1 with Patrolman Bloomfield, we received a radio run to the Memorial Hospital about a complaint. Upon arriving, the head nurse at the information desk stated a dog in the Wayne University Laboratory was moaning and crying for three hours. It was disturbing the patients at the hospital. We went to the laboratory, and the night watchman took us to the basement, where we found two dogs in steel cribs. One looked dead but the other was crying as if in great pain. Blood and foreign matter was pouring from the mouth. Some of the blood was dry indicating the dog was left to suffer some time. The dog seemed paralyzed, and the tongue was gagging the dog to the point it could not get sufficient air. I asked the night watchman what doctor was in attendance of the dogs if they were in a post-operative state, and he merely stated that no one watches them, and everyone had gone home. He said they are only interested in the time it takes before they die. If this is called for, in the advancement of science, then God help us all."

Patrolman Mobley called the Anti-Cruelty Society to take action. A report of the Society's findings was sent to Dr. Albert Heustis, Commissioner of Health of the State of Michigan, and after a Health Department investigation, Dr. Heustis issued a report in which he stated: "The Michigan Department of Health has placed the animal quarters of Wayne State University on probation for thirty days and we will seek compliance with the following procedures:

1. The improvement of the dog recovery quarters.
2. The provision of adequate medicines to provide for humane care both in the post-surgical procedures and otherwise.
3. The availability of a person properly trained and instructed in the care of the sick animals, who will make rounds during the hours that scientific personnel are not on duty, and who will administer first aid and call a responsible physician to aid any animals in pain or difficulty.
4. The assurance of the availability of a responsible doctor at all times.
5. The establishment of a procedure for the better identification of surgical cases, including a record of the physician responsible for medications, the anesthesia used, and other pertinent information.
6. The replacement of the smaller cages (found in a few instances) with those of adequate size.
7. The provision of more adequate exercise for post-operative dogs.
8. The movement of dogs on long-term experiments to outside boarding kennels with outdoor runways so that the animals can live a more normal life.

This is an outstanding series of conscientious actions by police, Anti-Cruelty Society, and Health Department to curb abuse and needless suffering in laboratories. It should serve as an example to the rest of the country.

It is particularly urged that directors of laboratories, medical school deans, and heads of departments read the required procedures listed above with care, and if the treatment, supervision and housing of experimental animals in their institutions fails to come up to these standards, take vigorous action to remedy the situation. A great deal of needless suffering would be prevented in laboratories throughout the nation by adoption of the sound requirements listed by Dr. Heustis. It would be encouraging to humanitarians if one or more large scientific institutions would adopt them voluntarily without compulsion of law.

## ANIMAL WELFARE IN INDIA

The following are excerpts from an article by Dr. H. E. Bywater, M.R.C.V.S., F.R.S.H. which appeared in "Animal Citizen", Vol. 1, No. 2, the official organ of the National Animal Welfare Board. Dr. Bywater is the liaison officer between the R.S.P.C.A. and the British Veterinary Association, of which he is an Honorary Member, one of only eight in the world. He was Honorary Treasurer of the latter for nearly twenty years.

"It is apparently not generally known that in March, 1963, the provisions of the Prevention of Cruelty to Animals Act, 1960, came into operation throughout India.

"This Act is based to a large extent on the British laws for the protection of animals, but, in some respects, it goes farther and in general, it is the most comprehensive legislation in the whole world for the amelioration of animal suffering. India, with its historically glorious religions and ethical principles of respect for all life is to be congratulated on giving a lead to the civilized world in respect of such legislation.

"All living creatures, save men, are given the means of protection and legal rights under this law and it is the duty of 'every person having care or charge of any animal to take all reasonable measures to ensure the well being of such animals and to prevent the infliction upon such animals of unnecessary pain or suffering.'

"In addition to the general rule, fifteen forms of common cruelties are listed, some of which, such as overloading or working whilst unfit, not only render the person actually in charge of the animal liable to prosecution, but also the persons causing the offence to be committed and the owner of the animal for permitting it to be done or by failing to give reasonable supervision.

"In addition to the more obvious forms of cruelty, it is an offence to carry an animal in a manner which causes unnecessary suffering—such as carrying fowls by their legs downwards, or confining birds in small cages, or failing to allow animals reasonable liberty and exercise, or abandoning animals, or failing to give adequate food, drink and shelter, or shooting birds after releasing them from captivity.

"Under the Act an Animal Welfare Board has been set up under the chairmanship of Shrimati Rukmini Devi Arundale (who was primarily responsible for getting this legislation passed) to advise the Government on all matters connected with animal welfare and to make rules with regard to certain aspects of animal protection. The Animal Welfare Board invited me through the R.S.P.C.A., London, to visit your country in order to advise the Board on certain aspects of its functions and to assess the plight and condition of the animal citizens of this great country.

"You may ask what are the impressions that I have formed so far with regard to the treatment of animals in this country, a country which gives breathing space to nearly one-sixth of the world's human population and one-fourth of the bovine animals of the world, besides many millions of other animals? I regret to say that this nation, holding a vital and important position in world affairs and to which many other nations are increasingly looking for guidance is sadly lacking in the practical application of animal welfare amongst the masses. This is no fault of your Central Government which, in addition to this progressive legislation, has established veterinary hospitals and encouraged better and more extensive research and education in the animal husbandry field—thereby laying the foundation of animal welfare through veterinary treatment, through the breeding of animals of greater economic value and through better feeding and management. . . .

"There is no doubt that poverty, ignorance, fatalism and man's indifference to his own fellow-beings has been

(Continued on page 4)

## THE YEAR OF THE GORILLA

*The Year of the Gorilla*, by George Schaller (University of Chicago Press, 1964).

No one knows more about gorillas than George Schaller. His knowledge came through persistent observation under the most trying conditions in the mountains of Africa, and his thoughts are worthy of consideration by conservationist and research worker alike.

"Monkeys and apes," he writes, "because of their close relationship to man, are also highly useful in the study of human diseases. For example, each year some 200,000 to 300,000 monkeys are imported into the United States at a cost of twenty million dollars for use in the production of polio vaccines and research in various medical fields. As always, man is harvesting ruthlessly without thinking about future supply. Once it was generally assumed that the number of rhesus monkeys in India was unlimited. Yet in spite of the fact that thousands of rhesus monkeys were trapped yearly for shipment to the United States, their status and behavior was completely unknown until Dr. C. Southwick studied them in 1960. He came to the conclusion that the supply of wild rhesus monkeys was diminishing rapidly and that critical shortages were apt to develop. The chimpanzee is more closely related to man in its blood types and susceptibility to certain diseases than any other animal. More and more of these apes are being shot and trapped in the wild for use in medical research. No one knows how many there are left and how many may be taken from an area without exterminating the population. No primate can long survive sustained and uncontrolled persecution. Unless rhesus monkeys and others are bred in sufficient quantity in captivity or taken on a sustained yield basis in the wild, medical research will suddenly find itself deprived of animals for future years. To manage a species intelligently in the wild or in captivity, a knowledge of its life history and social behavior is essential."

Mr. Schaller has spared no pains to learn about the social behavior of the great apes, and many of his experiences are remarkable. For example, "My most hair-raising experience in Africa was an encounter with a group of displaying chimpanzees in the Budongo Forest of Uganda. With Richard Clark, an anthropology student from Cambridge, I visited this forest for several days in early July, 1960, to observe chimpanzees. At dawn we crawled through the wet undergrowth in the direction of some hooting, barking, and gibbering chimpanzees that sounded like a conclave of maniacs. It had been light for half an hour when we reached the apes. Most of them were still in bed, squatting in their nests of branches anywhere from fifteen to ninety feet above ground. One juvenile left its nest and fed nearby on the olive-sized fruits of the *Maesopsis* tree. A female walked leisurely along a branch, but when she saw us she raced away through the tree and jumped twenty feet down into the leafy crown of a sapling, and from there to the ground. The others left their nests, hooting as they fled, and soon they were spread out in the distant trees, and on the ground where we could not see them. We followed the retreating animals, of which there were about thirty. Suddenly, as if by signal, all hooting ceased. The chimpanzees disappeared from sight, and we waited in the silent forest, scanning the tree tops and listening. Minutes passed. Without warning the hooting began again, this time all around us in the obscurity of the undergrowth, drawing closer and closer until the sounds seemed to come out of the earth itself. Not a single animal revealed itself, and this, coupled with the high-pitched screeches that appeared to erupt from the throats of a thousand furious demons, brought fear to our hearts. It was fear of the unknown, of being unable to do anything except wait. When the hoots reached their screaming climax, strange and new sounds reverberated through the forests — rolling, hollow, *bum-bum-bum*. Later we were to discover that the chimpanzees pound the hollow buttresses of ironwood trees much like an African beats a drum. The pandemonium subsided, and the chimpanzees retreated, leaving us thoroughly intimidated by their fascinating display.

"Man behaves remarkably like a gorilla in conflicting situations. A marital squabble, for example, in which neither person cares to attack or retreat, may end with shouting, thrown objects, slamming doors, furniture

pounded and kicked — all means of reducing tension. Sporting events, where man is excited and emotionally off guard, provide the ideal location for people-watching. A spectator at a sporting event perceives behavior that excites him. Yet he cannot participate directly in the action, nor does he want to cease observing it. The tension thus produced finds release in chanting, clapping hands, stamping feet, jumping up and down, and throwing objects into the air. This behavior may be guided into a pattern by the efforts of cheer leaders who, by repeating similar sounds over and over again with increasing frequency, channel the display into a violent and synchronized climax. Two of the functions of this display are communication with and intimidation of the opponent. Wherein lies the difference between gorilla and man?

"What indeed are the differences between gorilla and man?"

Am I satyr or man?

Pray tell me who can

And settle my place in the scale;

A man in ape's shape,

An anthropoid ape,

Or a monkey deprived of a tail?

"When I began to study gorillas, I was at first tremendously impressed by their human appearance — they gave the superficial impression of slightly retarded persons with rather short legs, wrapped in fur coats. The gestures and body positions of gorillas, and for that matter also those of other apes, resemble those of man rather than the monkeys. They stretch their arms to the side and yawn in the morning when they wake up, they sit on a branch with legs dangling down, and they rest on their back with their arms under the head. The great structural similarity between man and apes has been noted repeatedly since the time of Linnaeus and Darwin, and it is for this reason that all have been placed taxonomically into the superfamily Hominoidea. In their emotional expressions too the gorillas resemble man: they frown when annoyed, bite their lips when uncertain, and youngsters have temper tantrums when thwarted."

Schaller's views on the way in which to get the most out of observation of animals are interesting. Writing of a particular group of gorillas, he states: "Day after day I visited these animals until I felt that I knew and understood them, much as I would a human child before it is able to talk. Many scientists frown on the tendency to interpret the actions of animals in anthropomorphic terms, to read one's own feelings into the behavior of creatures, even if they are as closely related to man as the gorilla. But animals frequently do resemble man in their emotional and instinctive behavior, although, unlike man, they are perhaps not consciously aware of their own thought processes. I feel that something vital in our understanding of animals is lost if we fail to interpret their behavior in human terms, although it must be done cautiously. If a person thinks he understands a creature, he must be able to predict its behavior in any given situation, and with gorillas I was able to do this only if I followed the bare outline of my own feelings and mental processes. Only by looking at gorillas as living, feeling beings was I able to enter into the life of the group with comprehension, instead of remaining an ignorant spectator. Sir Julian Huxley expressed it in the following way in the *Journal of the Royal College of Surgeons of Edinburgh*:

"It is also both scientifically legitimate and operationally necessary to ascribe mind, in the sense of subjective awareness, to higher animals. This is obvious as regards the anthropoid apes: they not only possess very similar bodies and sense-organs to ours, but also manifest similar behaviour, with a quite similar range of emotional expression, as anybody can see in the zoo; a range of curiosity, anger, alertness, affection, jealousy, fear, pain and pleasure. It is equally legitimate and necessary for other mammals, although the similarities are not so close. We just cannot really understand or properly interpret the behaviour of elephants or dogs or cats or porpoises unless we do so to some extent in mental terms. This is not anthropomorphism: it is merely an extension of the principles of comparative study that have been so fruitful in comparative anatomy, comparative physiology, comparative cytology and other biological fields."

Dr. Hiram Essex, President of the National Society for Medical Research, requested that we publish in this INFORMATION REPORT his letter to THE NEW SCIENTIST. We are happy to comply with his request and to comment on his letter. For the text of THE NEW SCIENTIST article, see AWI INFORMATION REPORT, Vol. 13, No. 3.

## NSMR Letter

## AWI Comment and Correction

August 20, 1964

Editor, The New Scientist  
Sir:

Enclosed is a photo-offset-reproduced copy of the memorandum we received from the Research Defense Society of Great Britain. Only the small box stamped on the back page, stating that our organization reprinted and distributed it in this country, has been added.

The error in our newsletter account is the result of a misunderstanding. We were unaware that there was more than one formally established group studying the Cruelty to Animals Act of 1876, and thus had no reason to suspect that this document, "Prepared for the Departmental Committee of Inquiry into Experiments on Animals," was anything other than the conclusions of the Littlewood group. Thus our error was in the verb "recruited by" in the first sentence—an error corrected in the issue of our newsletter, also enclosed, appearing after this was made clear to us.

Your editorial gives the impression that you were unaware of the memorandum prepared by the *ad hoc* committee, comprised of representatives of scientific organizations concerned with this legislation.

As you will note, our synopsis, and the headline "British Re-Evaluate Act of 1876" are hardly distortions. The Royal Society and other organizations, we have been led to believe, are indeed British; the submissions detailed within the document are indeed re-evaluations. They might well, in view of the number of changes proposed, be called "sweeping."

You further state: "In the United States, where there are no controls over experiments on live animals, even a school child can perform drastic operations in the classroom. Bills based on British experience and designed to limit cruelty and ensure that nobody without experience can conduct experiments are now before Congress, but they are running into heavy weather largely as a result of propaganda of this kind."

This statement, it should be strongly emphasized, is grossly in error, as the following will make clear.

First, every single one of our 50 states has an anti-cruelty statute that applies to scientists as it does to other citizens. Ten of these state statutes have an anti-antivivisection clause specifying that the anti-cruelty statutes shall not be interpreted to *prohibit* properly conducted scientific study of animals.

The common law, as it has evolved, has determined that evil intent, not pain alone, must be present if cruelty is to exist, otherwise many an act of mercy would be punishable by law. However, any unjustifiable experiment or procedure is cruel by legal definition in the United States.

Thirteen of the states regulate scientific study of animals more closely than any other use of animals. For instance, Minnesota has a law adopted in 1949 that assigns to the State Livestock Sanitary Board the duty to regulate animal studies. This law is in addition to the regular anti-cruelty statute that applies to scientists as much as to any other citizen. In New York, the American Society for the Prevention of Cruelty to Animals has legal power to supervise animal use in laboratories.

The Federal Government has additional powers that derive from its financial support of research in medicine and agriculture. For example, the Department of Defense includes directions for humane care and treatment of experimental animals in all of its research contracts involving use of animals. The Department of Health, Education and Welfare has published standards for laboratory animal care prepared for the Department by the Animal Care Panel. The Veterans Administration has established a special division of laboratory animal care and is producing educational materials for the guidance of research workers in VA hospitals.

In addition to these external legal forces, there are a number of others governing animal experimentation in the United States, as in Britain. Scientists are responsible primarily to their peers, and to their employers and chiefs. These are the most powerful sanctions of all. A man's professional reputation is his life, and bad judgment—in any area—does nothing to add to that reputation. Ironically, it would be much easier to exercise this peer judgement openly if scientists did not have to fear that every critical word would be distorted, misrepresented, or quoted out of context by the antivivisectionist, the over-emotional, and the misinformed.

Then your editorial implies that American schoolchildren are permitted to undertake any sort of drastic experiment they wish to undertake. This, also, is untrue. Five states flatly prohibit "vivisection" in public schools. In other states, pupils and teachers fall under those same anti-cruelty laws mentioned above. Enclosed are the guiding principles laid down by the National Society for Medical Research, the Animal Care Panel and the Institute of Laboratory Animal Resources for the Science Clubs of America.

Your article stated: "bills based on British experience and designed to limit cruelty and ensure that nobody without experience can conduct experiments" are before Congress. The bills before the Congress of the United States vary tremendously in design and intent—and in the degree in which they are "based on British experience." Once more, you have overgeneralized. The actual bills are enclosed.

The NSMR statement created the impression that the official governmental committee which has made no recommendations had instead proposed "sweeping changes." In fact, no British group has proposed any major changes in the Act.

This statement, far from being "grossly in error" is perfectly true — as shown below.

The claim that the exemptions are merely to avoid prohibition of animal experimentation is false. For example, the Wisconsin exemption states flatly, "As used in this section 'torture' does not include bona fide experiments carried on for scientific research or normal and accepted veterinary practices."

Throughout the history of humane work anti-humanitarians have sought to insert words like "intentionally" and "wilfully" into the anti-cruelty statutes. In the majority of states, they have not succeeded. In Britain also intent is immaterial (see article "Animals and the Law" in this INFORMATION REPORT). It remains so in Dr. Essex's home state despite the effort last year to insert the word "intentionally" into the anti-cruelty statute of Minnesota. Dr. Essex thus takes refuge in general references to evolution of common law.

The Minnesota law to which Dr. Essex refers does not even contain the word "humane" much less does it require humane treatment of experimental animals.

The ASPCA of New York has no legal power to supervise animal use in laboratories, because of the exemption from the anti-cruelty laws in New York State. Any legal action for the protection of laboratory animals must be taken under the Hatch-Metcalf Act, administered by the State Health Commissioner. The ASPCA was given no powers under this Act. An ASPCA representative does visit laboratories on a friendly basis, but has no authority.

The Federal Government publishes vast quantities of educational materials on hundreds of different subjects. It hardly seems necessary to point out the distinction between "guidance" and mandatory law.

The legislation we support would give the Federal Government powers to prevent abuse of laboratory animals.

Dr. Essex's comments on "peer judgment" come strangely from a man who did so much to quash the effort made by Dr. Robert Gesell, within the scientific community at a meeting of the American Physiological Society where certainly no anti-vivisectionist was to be found. Dr. Essex's chief admonitions when Dr. Gesell suggested the British Act of 1876 as a sound model, were "patience" and "nothing British."

It is interesting to see that Dr. Essex seems to approve of use of the anti-cruelty statutes to prevent what he calls "drastic experiment" by school children. Yet in a recent newspaper interview, he strongly opposed this very use of the New Jersey anti-cruelty statute on a school boy's cancer-induction experiment. "I think it would be very sad" Dr. Essex stated for the Associated Press "if the NJSPCA should win a case of this kind." (*Asbury Park Evening Press*, Sept. 19, 1964.)

Three identical bills based on British experience were pending in Congress at the time THE NEW SCIENTIST article was written. There is no overgeneralization in the statement.

## NSMR Letter (continued)

You have also fallen into a syllogistic trap. Even if the bills were "designed to limit cruelty," this does not guarantee that they would do so. Aspirations to sainthood do not preclude demonic possession. We have certainly had no reliable evidence to the effect that Americans treat laboratory animals with less care and less respect than Englishmen. Laboratory animal quarters in this country, for instance, that lack air-conditioning, humidity control, anti-epidemic measures, fantastically complex air-filtering techniques and the like are the exception rather than the rule. Steps to improve laboratory animal technician training, laboratory animal care information exchange, and laboratory animal care technology have constantly been taken—and have been taken by scientists, not by the critic from the outside who is frequently unacquainted with even the simplest technical aspects of animal hygiene.

There are similarities between our countries. But you must recognize that there are also important differences. One of the most significant differences with respect to the subject under discussion is that the biomedical professions in Britain seem to have become accommodated to relatively specific and elaborate national governmental control of animal experimentation. In contrast, there is practically unanimous opposition by U.S. biomedical scientists to such centralized and bureaucratic control. In the United States, only groups fundamentally antagonistic to the use of animals in research advocate additional complications and obstructions in the scientific study of animals.

Sincerely,  
HIRAM E. ESSEX, Ph.D.

## ANIMAL WELFARE IN INDIA

(Continued from page 1)

largely the cause of the neglect of animal welfare in India. Jesus Christ has said, 'Blessed are the merciful for they shall obtain mercy.' A love for animals would automatically induce a love for fellow men and vice-versa. In fact, the animal welfare movement in the United Kingdom and America has led to the establishment of societies for the protection of children. Kindness to animals leads towards the brotherhood of man."

Dr. Bywater praised improvements in the treatment of monkeys exported from India, brought about through public protests and the resulting regulations. He strongly criticized slaughter house conditions and methods used by dog catchers in India. He said that the control and supervision of experiments on animals is a matter of urgency. He urged that the subject of kindness to animals be included in the instruction given in schools. "What is needed," he said, "is a drastic alteration in public consciousness and a return to the ideals of Asoka and Gandhi, or Christ and Mohammed, all of whom enjoined a love and respect for animals."

## WILD ANIMAL TRADE RESTRICTED BY ENGLISH LAW

On July 16, 1964, the Animals (Restriction of Importation) Act 1964 was enacted in Great Britain: it will come into operation in January, 1965. This Act provides that:

"The importation, save under the authority, and in accordance with the terms, of a licence granted by the Board of Trade, of a live animal of any of the kinds for the time being specified in the Schedule to this Act is hereby prohibited."

Kinds of animals listed on the schedule are: Callithricidae, Cebidae, Cercopithecidae, Dasyuridae, Daubentoniidae, Iguanidae, Indridae, Lemuridae, Macropodidae, Peramelidae, Phalangeridae, Phascolumidae, Pongidae, Rhinocerotidae, Sphenodontidae, Tarsiidae, and Testudinidae. In other words, a license is now required to import monkeys, marmosets, lemurs, gorillas, orang-utans, chimpanzees, rhinoceroses, certain reptiles, and most of the fauna of Australia. This Schedule may be modified by the Secretary of State, after consulting the Advisory Committee established under the Act. There are criminal penalties, and animals brought in in violation may be impounded.

Speaking in Parliament during the debate on the bill, the Minister of State for Education and Science, Sir Edward Boyle, said:

"I am fully aware of the justifiable concern of such organizations as the International Union for the Conservation of Nature and the Fauna Preservation Society about the extent and importance of the international trade in rare species of animals the survival of some of which is seriously threatened by this traffic. . . . As a general principle, it seems to me that the most effective means of controlling this traffic must be in the countries of origin. I am glad to learn that most of these countries are very much alive to the situation and that a number of them have enacted legislation precisely for this

## AWI Comment and Correction (continued)

The British Act was designed to limit cruelty and has successfully done so. The Clark-Neuberger, Ashley, and Rhodes bills have the same purpose and the same basic principles. It is absurd to suggest that any of these sponsors either aspire to sainthood or are suffering from "demonic possession."

"Fantastically complex air-filtering techniques" notwithstanding, AWI representatives have been so choked by fumes in animal rooms in three different major scientific institutions in the United States that they had to leave them, and even then suffered from throat irritation following the visits. Nothing like this has ever come to our attention personally or otherwise in any British laboratory. Neither have we ever found in British laboratories dogs dead in their cages, animals without water, massive infestations of roaches and ticks, animals kept in windowless rooms with lights off except for the brief cleaning time, sick animals hosed in their cages, animals with untreated, festering sores, animals that had undergone a series of student practice surgery operations, weak and emaciated—no need to continue the list. The British Act has prevented vast amounts of needless suffering. It has not hampered genuine research. Its counterpart should be enacted in our country.

purpose. The difficulty, however, is that a considerable number of these animals are to be found in wild and thinly populated countries where the administrative machinery may not be very strong and where frontiers are difficult to man and to control. Action to regulate the traffic in wild animals in receiving countries would limit the market and remove much of the incentive for illegal hunting. Obviously, international action is required."

## ANIMALS AND THE LAW

*Animals and the Law*, by T. G. Field-Fisher, M.A. (Barrister-at-Law) published by the Universities Federation for Animal Welfare, 1964, (available from the Animal Welfare Institute, \$1.50).

British law for the prevention of cruelty to animals is far more advanced than the corresponding American law. Humanitarians will do well to review this concise and readable volume, and it will stand them in good stead when confronted with legislative problems.

For example, it states clearly, ". . . the intention or otherwise to commit an act of cruelty is immaterial." Those who seek to weaken the American anti-cruelty statutes by adding words such as "wilfully" or "intentionally" can thus be shown that the laws upon which Henry Bergh based his work do not include such qualifying phrases. Retrogression in animal protective laws cannot be countenanced.

Last year in Minnesota, those in charge of revising the Criminal Code and Penal Laws sought to put the word "intentionally" into the anti-cruelty laws. In the battle which ensued, humanitarians won out, and the anti-cruelty laws were exempted from the revision.

This year, a similar attempt is being made in New York State. In addition to the addition of qualifying words, many parts of the law would be eliminated altogether if the revisers have their way. New York State humanitarians are unanimous in their opposition to the proposed revision.

*Animals and the Law* will stand humane organizations in good stead wherever revisions are proposed, and they are likely to keep coming up since the proposed model revision published by the American Law Institute. This body consulted no animal protective organization but arbitrarily cut the animal protective laws in its so-called "model" to a single page one half of which is taken up in exempting laboratories from the small scrap of protection left for animals. Adoption of the American Law Institute ideas would put the United States back in a class with the underdeveloped countries of the world which have not yet risen to the point of enacting adequate anti-cruelty legislation.

It is fortunate that *Animals and the Law* should have been published just at a time when a clear and ready reference to civilized animal protective laws is so much needed. It was warmly received in England, too, as evidenced by the reviews. *The Law Times* said, "For the general reader it could hardly be improved." *The Veterinary Record* stated, "This little book is wholly admirable and readable. It is a masterly condensation of the law relating to animals and is completely up-to-date."

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## THE ANIMAL IN GREECE

by ANTHONY CARDING, M.R.C.V.S., B.V.Sc.  
A.W.I. Laboratory Animal Consultant

Before one can understand the Greeks' attitude to their animals one must understand a little about the Greeks. Occupation by the Turks, two world wars and civil war plus the infertile nature of their land have made hardship a way of life for many of them.

Adults in the poorer villages eat meat perhaps once a month, while the children eat it seldom, if ever. Warm clothes are a luxury even in the hard winters when many people from the poor villages go barefoot. Wounds and afflictions which would drive us to hospital will often not even spur them to seek the medical aid which is now available to them.

My wife and I lived on Euboea, one of the larger Greek islands, for five months. Our purpose was to develop a pioneer veterinary service for an area including nearly forty villages and small towns. We ate, slept and worked with people living at subsistence level in poor mountain villages and came to feel affection and respect for them.

The donkey, horse and mule are the means by which many villagers earn their living. Despite their dependence on these creatures their neglect and maltreatment of them was often considerable. When gross overloading resulted in lameness there was little chance of the animal being rested and allowed to recover. On the contrary, the work still had to be done and while the animal could walk it would be goaded into work. The most surprising fact was

(Continued on page 2)

## UNIVERSITY OF CALIFORNIA AT LOS ANGELES CENTER FOR THE HEALTH SCIENCES

### Policy Concerning the Conduct of Animal Experiments Under the Influence of Curarizing Agents

1. In preparing animals for acute experiments under curarizing agents, all surgical maneuvers shall be performed under general anesthesia. No curarizing agents are to be administered until the entire surgical preparation is completed.

2. All wound edges, and particularly the tissues anterior and posterior to the ear bars, shall be infiltrated with local anesthetic. Similar infiltrations shall be made in the vicinity of the supra-orbital and infra-orbital nerves. The local anesthesia shall be repeated every two hours. No attempt is to be made to substitute surgical blocks for these procedures (as by section of the upper three cervical nerves or section of the gasserian ganglion), since important branches of the glossopharyngeal and vagus nerves innervating the tympanic membrane are inaccessible to surgical procedures.

3. In stimulating peripheral nerves in curarized preparations, no pulses longer than 1.0 msec. in duration, nor in excess of 5.0 volts amplitude are to be used. In this way, no fibres will be excited and stimulation of delta fibres will be minimal.

4. At the conclusion of acute experiments under curare, animals shall not be killed by merely withdrawing artificial respiration. All animals shall be killed by administration of intravenous barbiturate, or by similar methods producing immediate painless extinction of consciousness.

5. At the termination of every acute experiment, in which the brain is not removed, the entire thoracic cavity should be opened in order to prevent any possible revival of the animal.

6. All personnel working with curarized preparations shall sign a copy of this notice indicating that they have read and understand its contents.

Dr. Harry Lillie is the leading humane authority on the animals of the sea—in particular seals and whales. In the following article, he sums up the pitiful situation of the Hood and Harp seals in Canadian waters. It appears that the expression of public indignation on an international scale is beginning to have an effect, and word has been received from the Ontario Humane Society that new regulations recently enacted by the Canadian government will be going into effect in the coming season and will be under scrutiny by representatives of Canadian humane societies. Three humane officials will visit the sealing grounds this coming spring and report back. To quote from the Ontario Humane Society release: "The new regulations which the Minister stressed are only a beginning and can and will be reviewed, included a firm stipulation that no seal must under any circumstance be skinned or attempted to be skinned whilst alive. When the investigation of the sealing practices is completed the Society will publish for the information of its members a complete report on the sealing problem." The importance of these points is underlined by the fact that the Government of Canada has enacted legislation which claims for Canada the waters off the coast of Canada up to a distance of 12 miles instead of the old 3 mile limit. This new 12 mile territorial fishing limit will enclose large areas of water which were formerly international waters, and in which a considerable amount of sealing is carried on.

## THE SEALS OF THE PACK ICE

by DR. HARRY LILLIE

In the Northwest Atlantic in an area from Baffin Island and Greenland, the Harp seals and some Hood seals migrate south in a yearly cycle to the nursery breeding grounds in the pack ice of southern Labrador and around Newfoundland. This ice is steadily drifting with the south-bound Arctic current down the coast of Labrador and extending up to a hundred miles or more from land.

Almost continuously for the past 200 years man has attacked particularly the Harp seals during the March-April breeding in the Newfoundland area. The young pups and adult seals have been taken for their fat, for the manufacture of margarine, soap, and oil for lubricants as in whaling. While the skins of the adults go mainly to the leather trade, the babies with their 'woolly' white coats, have also been killed for the fur trade.

Here behind all the romantic stories is an industry which for the cruelty and waste of its methods has been surpassed at sea only by whaling.

The baby seals, helpless on the ice, are knocked on the head with gaffs, rough cut wooden staffs. This properly done involves no suffering and there is no other satisfactory humane method, but sometimes men will just daze the young seals with a kick before cutting the bodies out of the fat and skin.

Later in the season when the babies have taken to the water at three weeks to a month, the adult seals gather on the ice to moult. They are then shot from a distance with rifles, involving great cruelty and waste, many escaping badly wounded to die under the ice. Losses have been as high as two lost for every one secured and I have seen as many as five blood trails leading off one single ice floe with not one seal recovered.

After a brief rest during the last World War the Seals have been killed by ever more destructive ships and now aircraft; the numbers slaughtered estimated by the Canadian Federal Government as rising to 300,000 annually. But in my opinion from what I have seen of the added losses through callous shooting and careless handling of the pelts, the destruction must in some years have been nearer 400,000. Biological survey, partly by aerial photography, revealed an estimated total number of 3 million seals in

the year 1950. By 1960, survey showed the seal stocks had been nearly two thirds wiped out, while sealing companies objected to protective control that would reduce the profits. The biologists were now really concerned that politics, with big business money making, were being allowed to bedevil the moral obligations involved.

In June 1961 at a meeting of the International Commission for the Northwest Atlantic Fisheries (ICNAF) in Washington, D.C., attended by representatives of 12 nations, a Canadian report on the state of the sealing was followed by ICNAF adopting a resolution to take over care of the seals by bringing the sealing under its Convention provisions, and for a separate Panel to be formed to deal with the conservation. — This apparently encouraging sign of better things has been followed by sad selfishness and apathy.

At the Moscow meeting of 1962 it was reported that it was not possible to establish the special Panel as a few of the member nations had not signed a necessary protocol.

In 1963 the ICNAF meeting was in Halifax, Nova Scotia and was now of 13 nations, when it was again declared not possible to do anything for the Seals as some nations had still not completed the paper work.

Now this year 1964, news came of the unprecedented attack on the Seals, with the ships and over 70 aircraft, fixed wing and helicopters, involved in the slaughter. And this time under the stimulus of Press reporters who saw it first hand, the Canadians expressed their vehement disapproval against both the methods and the extent of the killing. The Minister of Fisheries in Ottawa then made the statement that the sealing was under serious consideration and it was expected that before the 1965 season restrictive regulations would be introduced by the Canadian Federal Government.

This 1964 meeting of ICNAF was in Hamburg at the beginning of June. A documentary film of the sealing had been made by the writer while surgeon to the ships of the fleets in 1949, and this film "NEWFOUNDLAND and the INVESTIGATION OF THE HARP AND HOOD SEAL FISHERY" was taken to show to the delegates. When the Canadian delegation brought up the Seal question, under the Norwegian Chairman and the Canadian ICNAF Secretary, action was apparently emphatically shelved once more with no discussion permitted.

Neither was the showing of the film to be allowed; until shortly after, with the request and fine co-operation of the West German Department of Fisheries, and under the auspices of the Government in Bonn, the film was given two showings independently of ICNAF. Fifty of the members of the delegations saw it and were shocked at what it showed, completely unstaged as it had been taken beside the men as they worked on the ice. Some of the delegations were upset that they had been, as they said, kept in ignorance of what actually happened in sealing, and concerned that the paper regulations of the Convention in such an urgent matter could not have been cut to let action to save the Seals be taken at once. Outside the official sessions of the conference nearly all the countries including France, West Germany, Iceland, Italy, Poland, Portugal, Spain and Russia promised they would now do all they could to remedy matters.

With the present set-up and administration in ICNAF, the hope that anything will be done even at next year's meeting cannot be very bright. Yet the disgust of the delegates at Hamburg about the situation was undoubtedly sincere. And the German Press with the powerful European 'Hamburger Abendblatt' reported the sealing situation well, following an independent conference at which they also saw the film.

At a meeting of the Survival Service Commission of the International Union for the Conservation of Nature, in London, England, also in June last, there was a proposal that the St. Lawrence, west of Newfoundland be made a sanctuary for the Harp seals. Canada's new sea fisheries zone could then be of considerable protection to the Harps in the ice of the open Atlantic, while the Hoods could be given complete sanctuary by agreement.

North America could ensure considerable protection for the seals against the excessive slaughter without ICNAF. First priority will have to be for an end to shooting of the adult and immature seals. If the use of rifles was stopped and the date of termination of the season advanced to mid April, the actual breeding stock would be largely protected and a considerable proportion of the young seals saved. In conformity with the biological survey findings, to stop the

steady destruction of the seal stocks, instead of a total seal kill of 300,000 to 400,000 as in past years this will have to be drastically cut down by two-thirds to 100,000 seals, which is still a heavy slaughter.

I have seen mother seals, after the sealers had passed, clamber back on to the ice and wonder why little bleeding carcasses could not suck milk from them.

Far out from the nearest sealing ship, I have lain down beside a Harp seal stricken with a bullet through the lungs. As its surroundings began to dim perhaps it wondered what it had done to deserve it. As I gently stroked the beautiful head there seemed no longer to be any fear. Then as my arm went round it, it pushed its nose into my wind-proof jacket and died.

#### THE ANIMAL IN GREECE (Cont. from page 1)

the amount of punishing maltreatment the mules could withstand.

Donkeys are the cheapest means of transport but they have to be reared for four years before they can carry a worthwhile load. Few poor people have the fodder to keep an unproductive animal for four winters. The result is that baby donkeys, like old donkeys and severely lame horses and mules, are turned out to die of starvation or to be killed on the roads. This is partly because the Greeks do not care to kill an animal and prefer to let nature do it for them, and, as far as equines are concerned, because of a restrictive law. This law requires a veterinary certificate to be produced to the local policeman who must come (sometimes from a neighboring town) to shoot the animal. In an area where the nearest vet lives a day's journey away. You can guess the effect of this law.

Most families keep a guard dog and some have hunting dogs, most of whose pups are unwanted. They are generally thrown away to die or kept for a few months and then eventually stoned out of the village. The only food provided for guard dogs is occasional pieces of stale bread, for the rest they must scavenge.

The Ministry of Health has conducted a relatively successful policy of informing the public of the evils for which dogs are responsible, principally rabies and echinococcus. Both are active killers. Rabies is being controlled in certain areas by vaccination, but people still suffer the agonies of hydrophobia and slow death. Echinococcus is a tapeworm whose eggs are picked up by humans who touch infected animals. When swallowed, the eggs develop into hydatid cysts mainly in the chest, abdomen or brain. Often they cause severe mechanical damage which may become inoperable due to large numbers of cysts developing throughout the body before medical treatment is sought. In one general hospital in Athens two out of every three operations performed in 1963 were for the removal of hydatid cysts. This goes some way to explain why many dogs are seldom touched by any other part of humans than their feet.

Because of the menace of stray dogs it is a well recognized fact that the dog population must be controlled. Police feed dogs who are at liberty with meat balls containing strychnine. For many dogs the tastiest meal of their lives is their last and heralds a ghastly death.\*

Shortly before the end of our stay on the island we met and came to respect Mrs. Eleanor Close, wife of the Director of the British Council in Athens. She asked us to work with the Greek Animal Welfare Fund she founded and which owes its success to her redoubtable energies and good sense. We were pleased to accept and subsequently moved to Athens.

We learned that Greece has had animal protection laws for thirty years. Some of them practically equal those of Britain. Unfortunately these laws are not applied. Over four years Mrs. Close has fought to have them brought into use but to no avail.

The stray dogs of Athens have a good chance of escaping strychnine poisoning. The late Queen of Greece in founding the Greek S.P.C.A. some thirty years ago ensured that this society should take over from the police the responsibility of running the city dog pound and humanely destroying the stray dogs. The S.P.C.A. receives a grant from the government towards the running costs and other dues are received from rabies vaccinations supplied free to the society by the government.

When Mrs. Close first visited the pound she was sickened by what she saw. Many dogs died from the trapping

\*Have just heard from Mrs. Close that the G.A.W.F. is exploring the possibilities of persuading the Police to destroy dogs with Nembutal in place of strychnine.

activities and were suffocated on their way to the pound. The overcrowding in the pens was horrific. Cats were packed into cages so tightly that often only the top layer survived. There was no drainage system and the dogs lay in mud and filth during the winter. The machine used for destruction was an unreliable electrothanaser. She has reorganized the pound, installed drainage, a modern electrothanaser, built a hospital ward, obtained an ambulance and a trailer to collect abandoned horses and donkeys from the city environs.

When we first arrived Mrs. Close and two capable members of the working committee were beginning to penetrate the hospitals to see how the animals used for experiments were treated. From the first it was obvious that much suffering was involved. In a country where there is much human need and little appreciation that animals can suffer pain, and the idea of experimenting on animals is new, one can imagine acute suffering will result.

If only the investigators would first make sure that they have basic facilities before experimenting, so much time and suffering would be spared. The doctors say that if they were to wait, their work would never start. Better to begin now, they argue, because something might be discovered. After all, Pavlov did his classical work without modern facilities. In this pioneering spirit the work proceeds.

As in other countries money is sometimes available for the most expensive apparatus before a proper dog kennel has been built.

One hospital had just completed a modern wing with a superb lecture theatre and staff rooms. After undergoing major abdominal operations the dogs would be left in the rain or snow to regain consciousness. Their only shelter was a few upturned plywood boxes. We found the dogs in the heat of summer with upturned drinking bowls which were rusty cans. Their 'food' was decaying garbage. One dead dog covered with flies lay unnoticed among the others whose own wounds were suppurating and beginning to break open. The surgeon let me take away a pitiful puppy which was severely jaundiced and emaciated to destroy her. This did not seem to affect his experiment.

Money to buy stolen pet or stray dogs must be paid by the experimenter. He must also pay for bread, when this is given. One doctor who uses seven or eight dogs a week refused to give his dogs any food. They were all used in acute experiments and none recovered. "What is the point of feeding them, I only have them a few days before I use them?" he asked.

At the University a doctor had been conducting experiments for years on dogs with gastric fistulae. He kept dogs crammed into cages so tightly that they could not raise their heads even though lying down. They were in a dark basement with filth and rubbish all round them. The stench was overpowering. The doctor advised us not to go down, it was too dirty!

Other hospitals had a race to develop the use of heart-lung machines so that intricate heart operations, standard in some countries, might become so in Athens. One hospital organised an experimental dog surgery unit and thousands of dollars worth of equipment was provided. A dozen or so dogs were kept in darkness in a filthy shed outside. My wife caused consternation by opening the door to examine the dogs. The men shouted, "Keep back, they will attack you." The dogs were frightened but responded to gentleness. Many were sick but none were vicious.

The doctors agreed to allow us to watch one of their experiments and to meet them afterwards to suggest improvements. The dogs were carried in by their legs with wire wound around their muzzles very tightly. Most of them were unable to breathe properly through their noses because of a respiratory infection. Two porters would throw a dog on its back and stretch out its limbs with all their force and tie them to the corners of the table. The nurses had to shout over the dogs' cries as the surgeon cut deeply into the thigh and separated the muscles to locate the blood vessels. This was without any form of anaesthesia.

Six dogs were bled to death. The seventh was partially bled as they had enough blood to prime the machine. The porter carried the dog out by its hind legs and threw it among the other dogs in the filthy shed. Its wound was not stitched.

We went back every day of the following week. Conferences were held. The doctors could not accept at first

that anesthetic could be given to the donor dogs used for bleeding. They thought it would interfere with the already anaesthetised subject of the experiment.

Eventually we gained their confidence sufficiently to persuade them to keep the dogs in the fresh air during the day. Bedding, and food-bowls were brought from the pound. We dressed the wounds and treated the sick dogs. We went into the hospital kitchens to try to arrange for better food than the decaying slime of napkins, lemons and yoghurt pots from the waste bins, that we had found on our first visit.

We had to be content at first with local anesthetic for the donor dogs but as the doctors' confidence grew they agreed to allow me to give a general anesthetic. I was even more relieved than they when it did not interfere with the recipient dog! If it had, I would have lost my influence with them.

Step by step things were improved in the hospitals, but as they did so, new experiments began and we had to start all over again with another group of experimenters.

Mrs. Close worked tirelessly and ingeniously. The Animal Welfare Fund hired a man to visit five hospitals and the University every day to clean out the dog quarters. It provided him with a motor bike and trailer to take nutritious food for the dogs. Large cages were made for the dogs in the basement I spoke of, and the whole place was cleaned out and white-washed.

Before leaving Athens we hoped to find someone to continue the work that I had started. We were delighted to meet Dr. Veltsos, the most progressive vet in Athens who, apart from being skilled, has an attitude to animals which coincides largely with my own. Dr. Veltsos agreed to continue the work, to our pleasure and relief. His influence, I hope, will be greater than my own as his views cannot be dismissed as those of a 'foreigner who does not understand the problems facing the Greek.'

Mrs. Close continues her work, raising money to supply the animals with necessities that should be provided by the experimenters. This is a hazardous and obviously unsatisfactory arrangement. No one should undertake an experiment on an animal without first having:

- a) Adequate accommodation for animals kept for experiments
- b) A healthy animal as a subject.
- c) Adequate facilities to perform the operation/experiment in scientific conditions.
- d) Assistants capable of tending to the needs of the animal and administering after care if necessary.

It is unrealistic to hope for these conditions in *every establishment* working on animals in Athens at the moment. It might be possible to offer every investigator and every experimental animal good conditions in the foreseeable future if *one centre* were made for animal experiments. If it were properly equipped and staffed with people with knowledge of animals and regularly attended by a veterinarian this would solve many of the problems facing investigators and welfare workers alike.

This idea was put to many of the leading professors and investigators. A gratifying amount of enthusiasm was shown and several meetings were held. But funds are not available. This could be an insoluble problem.

I hope that these incidents and ideas have given you an insight into the work that has been done, is being done and still has to be done in Greece.

The following article from the *Conservation Guide* of the National Audubon Society announces the significant rules recently issued by the Secretary of the Interior, Stewart L. Udall, in order to place more strict regulations on the use of pesticides on public lands.

#### UDALL'S PESTICIDE RULES

Secretary of the Interior Stewart L. Udall has issued stringent rules regarding use of pesticides on the more than 550 million acres of public lands administered by his Department.

The rules were developed after an earlier secretarial directive that the Department's standards should set an example for all others to follow.

The new guidelines, which apply to all Interior programs for the control of pest plants and animals, were developed by Frank P. Briggs, Assistant Secretary for Fish and Wildlife.

The order directs that first priority be given to non-chemical methods in pest control. When chemicals are

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## A.W.I. ANNUAL MEETING

The annual meeting of the Animal Welfare Institute was held November 21st in New York. Dr. Eric H. Hansen, President of the Massachusetts S.P.C.A., made the presentation of the Schweitzer Medal to Patrolman John Mobley of the Detroit Police Force, formerly of the U.S. Air Force, whose determined actions brought major improvements for hundreds of experimental dogs (see INFORMATION REPORT, Vol. 13, No. 4).

Dr. Hansen is one of only three presidents of the Massachusetts S.P.C.A., founded by George T. Angell, in the latter half of the nineteenth century. Mr. Angell, the most popular speaker the humane movement has ever had, drew such big crowds that hundreds of people were sometimes left standing outside the halls where he was lecturing. An attorney, he laid a solid foundation carried on first by the humane clergyman, Dr. Francis Rowley, and now by Dr. Hansen, who has led the M.S.P.C.A. through the stormiest period the humane movement has weathered since its founding. While other large and old societies wavered and gave up their principles, the M.S.P.C.A. has stood firm. Those who have preached expediency in the humane movement for fear of losing support are confounded by the fact that the M.S.P.C.A. is by far the best endowed humane organization in the country.

Dr. Hansen's wide experience of humane work and his knowledge of the history of the movement made his speech in presenting the medal noteworthy. He spoke of the great influence of individual cases in advancing the anti-cruelty cause: Mary Ellen, the beaten and tortured child rescued by Henry Bergh and protected under the law he had gotten passed to protect animals from cruelty, is a classic case. Turning to the effort to get decent treatment for laboratory animals, he spoke of the Overholt Clinic case, prosecuted by the M.S.P.C.A. in which both the doctor conducting the heart-lung experiments, and his animal caretaker were found guilty of cruelty. In presenting the medal to him, Dr. Hansen praised Patrolman Mobley's courage and determination. He urged all humanitarians to work for the enactment of the Clark-Neuberger bill to require humane treatment of laboratory animals throughout the nation.

Other speakers were Dr. Anthony Carding, whose report on animals in Greece appears on the first page of this INFORMATION REPORT, Alexandra Peschka, Executive Secretary, who brought home to the meeting the desperation of dogs caged for long periods in windowless rooms, and Dorothy Dyce, Assistant to Dr. Carding, who told the group about the work on the A.W.I. film, "Proper Care and Housing of Laboratory Animals", and reported on the 47 laboratories visited since the A.W.I. Laboratory Animal Consultant service was instituted. Giving some specific examples, she said, "Large rabbits, weighing six to eight pounds, are crowded into antiquated cages which measure 12"W x 18"L x 10"H. The size of the cage is made more uncomfortable by the addition of a feed bowl and water bowl, each approximately 5" in diameter. The rabbits are unable to move in any direction. The man who takes care of the rabbits told me he had been employed there for 35 years 'and wasn't proud of it.' He also told me that the same miserably small cages were there when he started at the hospital in 1929. While I was in this laboratory, an investigator was removing a kidney from a large mongrel dog. I asked the Animal Supervisor what type of sedation would be given this dog and other animals for post-operative pain. Her answer was shocking. She said, 'We don't give them anything. When I took my training as a technician, I was taught that animals don't feel pain the way humans do.'"

Mrs. Dyce also gave examples of successful activity by the A.W.I. service: "At Wayne County General Hospital in Eloise, Michigan, post-operative dogs were chained to posts in the dirt behind the hospital. They had no shelter. Over the years the dogs had dug deep holes in the ground. This served as a recovery area. The head animal caretaker here is a mental patient. His salary is \$20 a month. As a result of a complaint by the Animal Welfare Institute, this animal facility has been completely renovated. The post-operative dogs have new quarters and a spacious exercise area. Footage of the new interior and of the runways has been taken for our film on the 'Proper Care and Housing of Laboratory Animals.'"

## THE ANNUAL MEETING OF THE CANADIAN SOCIETY FOR ANIMAL CARE

Representatives of the Animal Welfare Institute attended the third annual meeting of the Canadian Society for Animal Care, held October 23rd and 24th in Montreal. This organization was formed in March, 1962: its aims are the creation of a coherent program for the training and certification of technicians working directly with experimental animals, and the dissemination and exchange of information on animal care. The Society publishes a periodic newsletter.

Dr. Harry C. Rowsell, Professor and Head of the Division of Pathophysiology of the Ontario Veterinary College at Guelph, was in the chair, presiding over all the sessions and leading the discussions. Several excellent papers were presented; of particular interest were the films shown in conjunction with a paper on insulin assays on mice, which were taken at the animal quarters of the Food and Drug Laboratories at Ottawa. These laboratories are under the supervision of Mr. E. R. Gregory, the Secretary-Treasurer and one of the founders of the CSAC. The mice were housed in exemplary solid-bottomed cages with sawdust bedding, and their healthy condition did credit to Mr. Gregory's management. Other speakers stressed the necessity of maintaining a sanitary environment for laboratory animals. It was said that animals are known to prefer a clean environment to an unsanitary one, and that in properly clean animal quarters, stress and other uncontrolled factors do not interfere with experimental results.

The President of the AWI spoke on the importance of the animal technician. She emphasized the analogy between the technician and the hospital nurse both of whom are concerned with the comfort of their animal or human patient. The difference is that in the case of the human patient, the preservation of life must be the first consideration, while in the case of the experimental animal, the alleviation of pain and distress is the primary aim, and this often means a decision to sacrifice the animal by painless means.

Mr. W. C. Wallace and Mr. J. van Schyndel, both of the Defence Research Laboratory at Shirley's Bay, Ottawa, gave a demonstration of a method of hypnotic restraint of the rabbit. Mr. Wallace told us they had had considerable success with rabbits to date, but had not much information on other species. "By placing the rabbit on its back and gently stroking its belly while speaking reassuring words, repeated slowly and monotonously, the rabbit attains a hypnotic state to a degree where subcutaneous, intravenous or intramuscular injections, as well as more complex procedures can be made. Both the U.S. Atomic Energy Commission and Cancer Research Institute in the United States are supporting further study of this method." Mr. Wallace reports that in the case of guinea pigs, "it has become routine for us to anaesthetize with carbon dioxide for normal laboratory procedures. A cylinder of CO<sub>2</sub> connected to a clear plastic container works well, although dry ice in water in a desiccator or similar jar can be used. This method is humane, fast and effective. The pigs are unconscious in 20-30 seconds and remain so for 2-3 minutes, which is long enough for a heart puncture."

AWI representatives were well impressed by the quality of the meeting, and were happy to be able to make contact with members of the CSAC, as well as to be able to distribute AWI publications from the AWI exhibition booth at the meeting.

UDALL'S PESTICIDE RULES (*Cont. from page 3*)  
deemed necessary, safety will be the main consideration.

"Prior to the use of pesticides," Secretary Udall said, "there must be a determination of anticipated results and possible harmful effects. Only chemicals registered for use on a particular pest may be employed, and instructions for use must be carefully followed."

Secretary Udall directed Interior agencies to inform State and local authorities, if their interests are involved, when proposed Interior pest-control activities are to be conducted. He directed that State and local laws be complied with in such programs.

The guidelines require the use of the most selective chemicals available, minimum dosages with the safest carriers, and application under conditions that leave no reasonable doubt that harmful effects will be minimized.

Interior agencies were told to avoid using compounds which are known to concentrate in living organisms, such as DDT, chlordane, dieldrin, and endrin.