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Charles Parkhurst

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Museum Conservation: A Cooperative Solution

ART museum heads have acknowledged their responsibility for the preservation of cultural materials entrusted to their hands. Their duty is not just to make these things available in attractive displays for the public, but also to protect and preserve them for all future generations. Failure to do everything possible to forward this aim is to shirk responsibility. Few directors are personally competent or have time to undertake the actual technical work and, therefore, rely on trained conservators who somehow must be added to their staffs.

Ten years ago a group of art museum directors, of which I was one, met to find a way to conserve the works of art in their collections, to provide education and information on the structure and care of these works, and to do this at a cost within their reach. From this meeting sprang the Intermuseum Conservation Association (ICA). This article is a tenth birthday report on that experiment.

SOME PROBLEMS

Great as is the need for adequate care, it is not always possible to provide it. The greatest obstacle is certainly the cost, not only the initial cost for equipment, but the continuing costs for examinations, treatment, stabilization of conditions in galleries and store rooms, and payment for competent services in these connections. It is estimated that the absolute minimum cost for basic laboratory equipment is in the neighborhood of $5,000 and another $12,000 each year is required for salaries and materials. Such costs are out of proportion in a small museum where conservation should comprise not more than about 10% of the operational budget. Only a larger museum whose annual budget exceeds $200,000 could reasonably expect to establish its own small laboratory.

The dilemma is an old one, but heretofore this problem has not been considered justification for a regular budgetary item. Previously such costs were deemed *extraordinary* and met by emergency appropriations. As a result of this practice a backlog of necessary work has piled up in many museums. When a conservation program is finally undertaken it requires time to attend to this accumulated work before the demands for laboratory services reach a maintenance

ABOUT THE AUTHOR: Charles P. Parkhurst is Head of the Art Department and Director of the Allen Art Museum at Oberlin College. He holds degrees from Williams, Oberlin and Princeton. Prior to 1949 he was with the National Gallery in Washington, D.C., the Albright Gallery in Buffalo, and Princeton University. During World War II Mr. Parkhurst served as an officer in the U.S. Navy and later with the Monuments, Fine Arts and Archives Section of SHAEF Headquarters in Germany, serving in the field. Mr. Parkhurst has just completed a term as Vice-President of the Association of Art Museum Directors, is a Director and past president of the College Art Association, a Trustee and President for 1960-61 of the Intermuseum Conservation Association, a member of the American Association of Museums, and Associate in the International Institute for the Conservation of Museum Objects.

plateau. Thus the initial cost may be high, but should lighten as time passes, approaching a fixed annual figure.

Given ample funds, however, there is still the problem of finding trained personnel informed about their goals as well as their art and craft. Finally, few museums can find room for a conservation laboratory, because the need for such installations was not recognized in their planning.

THE ICA

The ICA began with five members, the Albright Art Gallery of Buffalo, the Columbus Gallery of Fine Arts, John Herron Institute of Indianapolis, Allen Art Museum of Oberlin College and the Toledo Museum of Art. They met with Richard D. Buck, Conservator of the Fogg Museum, Harvard, who was instrumental in founding the ICA and was appointed Chief Conservator. The Association was incorporated in the State of Ohio with offices and laboratory installed in the Allen Art Museum on the campus of Oberlin College and equipped by the College with the basic tools which have been supplemented as need arose. This site was selected for its central location among member museums and for the facilities, diverse services and experts at hand.

PURPOSES OF THE ASSOCIATION

The character of the Association is best revealed by the fact that each member museum considers the laboratory of the Association to be its own, a part of itself and its own activity and growing from its own needs.

As stated, officially the ICA is a non-profit and tax-free corporation, governed by a Board of Trustees representing each institutional member. It was established to improve and disseminate knowledge of the theory and practice of conservation in relation to works of art and objects of cultural interest in the mid-Western area and, while implementing this goal, to conserve art treasures belonging to its members. Thus, its ultimate goal is research and education and the corollary is the actual conservation of important works of art.

In part, the purpose of the Association is preventive and protective: to preserve works of art, restore already damaged or deteriorated objects, and prevent further losses by prompt and continuing remedial action. Buck wrote in 1951 in *The Museum News*, "Such a program marks the difference between a policy of conservation and a policy of restoration. Restoration is, at best, only a salvage operation. Often it is necessary to make the best of a damaged thing. But restoration deals with damage after it occurs. The satisfactions of restoration are limited, like the satisfaction of a brilliant rear-guard action in a military retreat. It is obvious that any success in preventing damage to works of art not only makes expensive restoration unnecessary but, and this is more important, it also preserves the integrity of the object. It could be argued that well-planned, long-term conservation is the best insurance policy that can be bought."

In its laboratory work the Association does not answer questions regarding style, artistic merit, authorship, date or provenance, nor undertake to detect fraudulence. These are in others' provinces, but data having a direct bearing on such questions may be derived from laboratory examinations.

Perforce, ICA began as a boot-strap operation, and whatever the potential, when the first painting was treated in the laboratory the educational and research files of the Association were not yet rich. With the growth of its records and documentation of data from over 450 works examined and treated in the laboratory, and over 2,000 works inspected and re-inspected periodically in the galleries of the member museums, the educational and research resources have been greatly increased. It could be alleged that this is a scheme by which the membership provides "raw material" for research and study and in return is afforded protection, counsel, restoration and other services. Membership has now increased to eleven with new members joining in this order: the Davenport Municipal Art Gallery, the Museum of Cranbrook Academy of Art, Minneapolis Institute of Art, the Munson-Williams-Proctor Institute of Utica, Rochester Memorial Art Gallery and the Cleveland Museum of Art.

MEMBERSHIP IN THE ICA

Membership in the Association is institutional, open only to non-profit, charitable and educational organizations owning or having custody of works of art and whose applications have been approved by a majority of the Trustees, and upon payment of an initiation fee. The Association is not a private or closed organization, nor is it a commercial, profit-taking enterprise, nor for the use of the trade. However, not only do works of art belonging to

members come under the surveillance of its laboratory, but also all objects otherwise in a member's custody, on loan, or in which they have an interest. This provision permits extension of the Association's field of work to much superb art now in private hands, providing "health insurance" for these additional treasures. The Association occasionally takes on work for non-member institutions eligible because of their charitable or educational character. For example, work has been done for the Taft Museum, the Milwaukee Art Institute and the U.S. National Park Service (Independence Hall), among others.

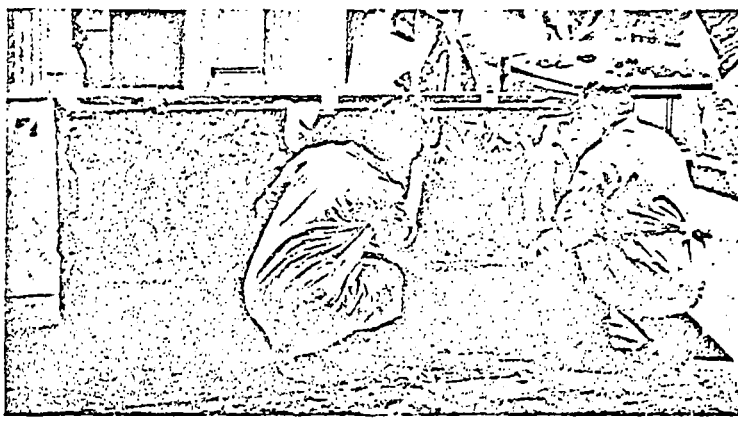
The obligations of membership include designating one representative to the annual business meeting and an annual guarantee of $700 per member to the laboratory. This annual fee is earmarked as follows: $400 for annual inspections and records, $200 to the research fund, $100 to the operating funds. Above this, members may request conservation services according to their needs and allotted funds; Oberlin, for example, annually budgets $2,600.

SERVICES FOR MEMBERS

On its part, the Association, through its laboratory, makes available to members a complete service in conservation including periodic inspections of collections.

The records of these inspections, and recommendations ensuing, are left with the museum director for his guidance, and they include, in addition to notations of defects or insecurity, some general advice regarding future care and suggestions concerning handling, shipment, and so on. These records are continually revised and become the "health record and medical history" of each particular piece. As Buck points out, "For the curator the inspection records provide the answers to many questions. What are the effects on the collection of the various factors in the museum environment, such as lighting, darkness, heat, cold, humidity, dryness, dust and atmospheric gases? What changes may be desirable to improve this environment for the sake of the collection? What objects may safely be transported? What objects require special precautions in handling or exposure? What is the progress of deterioration in individual cases? What treatment is urgent, and what may safely be postponed? What type of treatment is required, and what particular skills are needed?

If a work of art needs more than first-aid, complete technical examination and treatment is provided at the laboratory. However, on occasion the staff has gone outside to perform special types of services. In particular I would like to cite the case of the exhibition, "Masterpieces of Flemish Art, Van Eyck to Bosch," held at the Detroit Institute of Art and in Bruges, Belgium in 1960. In this special project the objects to be included were examined, treated when necessary, inspected in the course of the exhibitions with detailed reports submitted to each lender at the conclusion of the combined exhibitions. Moreover, the Association advised on packing and shipping, and recorded atmospheric conditions in transit. Similar services have been extended to other exhibitions going to Europe and South America.



Treating sculpture in the Albright-Knox Art Gallery, in preparation for the reopening of the Gallery with its new wing.

THE ICA STAFF AND CONSULTANTS

Richard D. Buck, as Chief Conservator, brings long experience to his work. A graduate of Harvard University with two degrees from that institution, he did technical research at the Fogg Art Museum, eventually becoming Chief Conservator. He has taught at Harvard, Wheaton, and now is a member of the teaching staff of Oberlin College as Lecturer in the Art Department.

The regular staff of the laboratory, in addition to the Chief Conservator, consists of Conservator, Technical Assistant and Intern. The Conservator is Miss Anne Clapp, trained in the Department of Conservation at the Fogg Museum and formerly with the Jamaica Institute, Kingston, and the National Park Service, Independence Hall, Philadelphia.

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The Technical Assistant is Mr. Delbert Spurlock who also serves as Technical Assistant to the Curator of the Allen Art Museum, where he received his training. The Internship is a short-term appointment made to neophyte conservators for training purposes and the present incumbent is Miss Kay Silberfeld. To support this staff there is an Advisory Board of the Association, individual members of which act as consultants and almost all of whom have actually participated in the work of the laboratory. Four have been particularly active in this connection, Rutherford J. Gettens, Head Curator of the Freer Gallery Laboratory, Smithsonian Institution; Robert L. Feller, Fellow in the Mellon Institute at Pittsburgh; Frederick Foreman, Professor of Geology, Oberlin College; and Wolfgang Stechow, Professor of Art History, Oberlin College.

In addition the Association has consulted Professor Earle Caley of Ohio State University; James Roth, Conservator, Nelson Gallery of Art, Kansas City; and Paul Coremans, Director, Centre National de Recherches Primitifs Flamands et Institut Royal du Patrimoine Artistique, Brussels.

Finally, many members of the faculty at Oberlin College are available and have provided expert consultation in their respective fields of organic chemistry, physics, optics, history of color, art history, mineralogy and painting.

THE LABORATORY

The laboratory is equipped with the usual laboratory tools, furnishings and utilities as well as with a complete office. In addition it has special lights for examination and treatment, spray equipment and an exhaust fan, a vacuum hot table for relining, and an "at hand" storage room. To aid in examination there are an x-ray apparatus, an infra-red scope, a binocular microscope, and an analytical desk equipped with petrographic, Ultrapak, and comparison microscopes used in the micro-chemical and micro-physical analysis of materials, and equipment for normal, infra-red, macro- and micro-photography. Cinematic equipment is available.

An important resource of the laboratory is a collection of pigments, most of them a gift of Edward W. Forbes, supplemented by a gift of Far Eastern pigments from George Rowley. All of these have been mounted on microscope slides for comparison with unknown pigments. Photomicrographs of them are used in teaching.

As an additional asset, in the same building with the laboratory is an art library of 20,000 volumes supplemented by the Edward Waldo Forbes technical library.

OPERATIONAL PROCEDURES

The operational procedures of the laboratory are quite simple. The member museum initiates action with a request addressed to the Chief Conservator for examination of a work. This request may have been prompted by the laboratory inspection report, by an exhibition schedule, a loan request, or the owner may seek detailed information on the condition, technical character, or preservation of a work it plans to purchase. In any event, the request must be in writing and duly signed by an authorized agent of the institution, and when that institution is not the owner, counter-signed by the owner.

This request is, in fact, a contract authorizing the laboratory to take the necessary steps to secure evidence for the report. It also defines and limits the responsibility of the laboratory.

Detailed technical reports are made to members regarding laboratory findings on their art. Each member agrees that these may be used for scientific and educational purposes and reports are held in confidence by all parties. However, a member museum may publish data on its own works and the laboratory will conversely not publish them without the express consent of the member.

After examination, duly reported to the member together with recommendations for treatment, the treatment is authorized by signature of the owner and carried out. Records of examination and of treatment are kept on file in the laboratory and are available in transcript to owners at cost.

The following is a good sample of part of an examination report on an Umbrian, 15th century, polychromed wood figure of *St. Sebastian*, from Oberlin: "*Support:* A complex fabrication of wood components. The wood itself is not the same throughout. A sample taken from the base (and this is continuous with the feet) and from the top of the head is a light hardwood having many of the characteristics of poplar. The broken face of the little finger of the left hand shows that this wood is a white softwood with inconspicuous or no resin ducts, like spruce. These identifications must be taken as tentative. It is interesting, however, to com-

. Members of the staff at work in the ICA laboratory, Oberlin.

pare this provisional evidence with the recent statistical survey of Mme. Marette: *Connaissance des primitifs par l'etude du bois*. There is a bearing on the time and place of the object's origin. Of the 345 Italian panel paintings Mme. Marette studied, 3 were on spruce, 310 were on poplar. Of the three paintings on spruce, two were 15th-Century Umbrian. This shows, at least, that spruce as well as poplar was available in Umbria in the 15th Century. Except for nine panels of fir, Mme. Marette discovered no other softwood panels; and all of the fir panels were from North Italy or Florence. Although the identification of our specimen as spruce is tentative, it seems unlikely that it would be confused with fir..... *Ground:* A specimen of the ground was taken from the back along a crack between the shoulder blades in an area that appears to be of original construction. The medium is water soluble and has the characteristics of animal glue. The inert material is calcium sulfate, a larger part of which is in the form of anhydrite. Here again there happens to be historical evidence of interest. Gettens and Mrose ("Calcium Sulfate Minerals in the Grounds of Italian Paintings," *Studies in Conservation*, Vol. I, No. 4 (1954), pp. 174-189) found gypsum and anhydrite in grounds taken from most of the 20 central Italian paintings investigated, whereas 11 of 12 Venetian and north Italian paintings had grounds comprised wholly of gypsum. Paintings from northern Europe contain chalk, calcium carbonate, almost without exception, as the ground layer."

Proposals for treatment are simply worded, as in the case of that made for a Florentine painted wood *Crucifix*, ca. 1335 A.D., owned by Oberlin:

"1. Replace the auxiliary cleats at the back to give satisfactory stiffness to the main support.

2. Remove loose coating material on the back of support and treat the back and the exposed wood at the edges with moisture barrier material.

3. Remove surface coating, later paint, and grime.

4. Reattach loose paint and loose ground where possible.

5. Fill open lacunae with putty. (Question of filling the old lacunae in the diapered design may be postponed until after cleaning in order to judge the effect of the losses on the exposed design.)

6. Inpaint losses.

7. Coat lightly with P.V.A.

Estimated cost: $500"

A typical record of treatment from the files reads in part as follows for a Hobbema *Landscape*, also from Oberlin:

"Examination and analysis of sky blue paint. (Smalt) *Surface coating.* Removal with ethylene dichloride or acetone. Heavy coating appears to be in two layers but is completely removed by the solvents with no apparent effect on any of the paint. A few spots of retouching were removed in the sky. Along the left end at the lower join, which may have parted at one time and been rejoined slightly out of register, a thin layer of gesso putty was removed to uncover a narrow strip of old paint. Gesso was removed from old lacunae along the top edge. All lacunae were cleaned carefully and filled with gesso putty and dressed.

Inpainting. Basic tones were put over the puttied losses with watercolor.

Surface coating. A spray coating of polyvinyl acetate was applied.

Inpainting. Final adjustments in the inpainted tones made with oil colors mixed with n-butyl methacrylate polymer.

Moisture barrier. In the course of cleaning, transverse (cradle) members were removed and back and edges of the panel were coated with a solution of Saran F 120 (Dow), being primarily polyvinylidene chloride, in methyl ethyl ketone, 15%. This

dried over night and a second coating was applied and dried. On this day a final coating of wax (Beeswax and paraffin 1:1 in naphtha) was applied and the cradle members were replaced. There was a very gentle convex warp to the panel. The cradle members had plenty of clearance and slid easily. (Each batten was secured with a screw through one longitudinal member to prevent battens from falling out.)

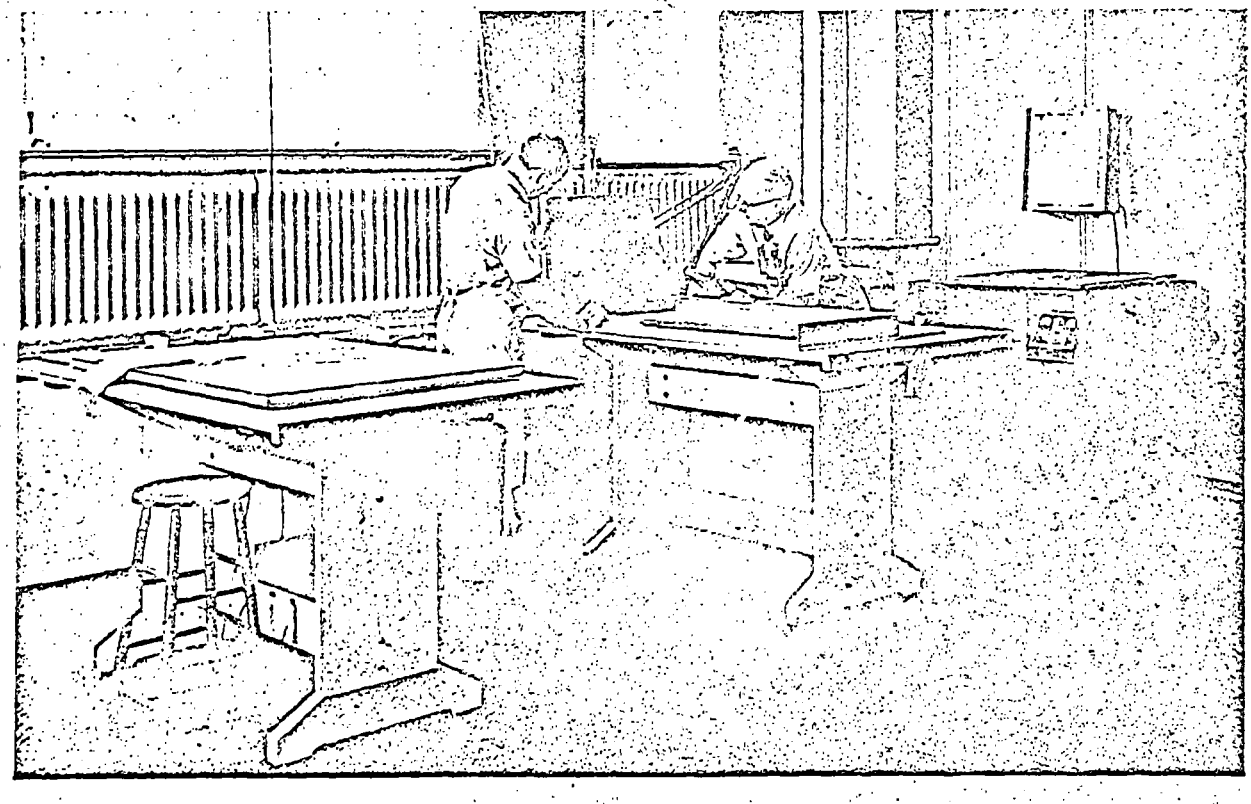
Surface coating. A final spray coating of polyvinyl acetate in MI 2 was applied to the painted surface."

SCIENTIFIC AND EDUCATIONAL ACTIVITIES

Information bulletins, articles, films, and books are published on special problems relating to conservation and the following have appeared. (I must make it clear that except for the book, these publications are informal and are produced solely for members.) Bulletins No. 1, *Humidity Recorders and Indicators;* No. 2, *Atmospheric Control and Storage Spaces;* No. 3, *Mounting and Framing: A Problem in Security;* No. 4, *Packing Paintings for Shipment;* No. 5, *Some Applications of Mechanics to the Treatment of Panel Paintings;* Film Short No. 1, *Framing a Warped Panel;* and a book, *On Picture Varnishes and their Solvents,* by Robert L. Feller, Elizabeth H. Jones and Nathan Stolow, Oberlin, 1959.

To facilitate this and other research a special grant was obtained from the Lilly Endowment, Inc. of Indianapolis to enable time to be spent on pure research in connection with conservation problems and, as noted, each member now contributes a small sum each year to maintain this fund. The fund is used for research which would not normally be conducted during the course of examination and treatment of works of art belonging to members and for which, therefore, the members could not be expected to pay. The Lilly grant made possible a seminar on picture varnishes and their solvents which culminated in the publication of the book on varnishes already mentioned. Although this grant is substantial, the Association is on the look-out for further assistance from among those who see its value and future harvests.

Discussing the treatment of a Chinese tile. Southwest corner of the laboratory with part of the x-ray apparatus in the background.



ADVANTAGES AND DISADVANTAGES

There is no doubt that the advantage of association here is to put a well-equipped laboratory and highly competent staff and consultants at the disposal of eleven museums at cost. However, I must not neglect to note certain disadvantages which may have been quite apparent to the reader: first, the necessity to ship pictures outside the museum for examination and treatment; second, the fact that members' collections are only periodically under the watchful eye of the conservator; third, the necessity to schedule the Association's work so that all get an equitable share, providing reasonable progress to regular work, but few getting all the work they would like at certain times; and fourth, the fact that emergency and urgent work can only be had at the expense of postponing other work on the schedule.

Provisions can be made to minimize all of these objections to some degree. For example, with respect to the necessity to ship pictures outside the museum, the laboratory had instituted the prolonged "mission" to a member museum, on request, to carry out specific assignments and examinations with x-ray and other equipment and to perform minor treatment on the spot where necessary. With respect to the lack of continual surveillance, it must be noted that to some extent members can provide their own, for there are few museums of any size which do not have at least one person on the staff trained in elementary inspection techniques, and the laboratory of the Association will assist in the training of others.

I should mention again the advantages of examination of prospective acquisitions. Here is a type of added protection against initial error in acquisitions which is highly regarded by all members now in the Association and used by most of them.

Another important product of the laboratory beyond the actual care and the examination of prospective acquisitions, is the accumulation of complete, accurate, and responsible records of inspection and of treatment. Knowledgeable museum people generally know where they can turn for responsible commercial restoration, but, as a general rule, they do not get full information on the work performed, however good that work may have been. This seems to me to be a most unfortunate consequence of the employment of commercial restorers. Moreover, there is no question that cooperative conservation is less expensive by far, and provides inspection and records as well.

THE OUTLOOK

Old problems remain and new problems will arise which the ICA will have to face, *inter alia*, the augmentation and training of its own staff, the question of rates for members as opposed to rates for non-members, the extent to which outside work can be assumed, the ultimate size and geographical limits of its membership, the education of curators and technicians among its members (a series of short seminars has been planned), not to mention the enlightenment of the various members' own Trustees. Questions and plans dealing with such problems, and many more, are taken up at each annual meeting of the Board of Trustees.

All of the evidence collected for this summary tenth birthday report indicates that this child is healthy and will continue to grow. In point of fact this child appears already to be an adult, reproducing its kind in England, following a proposal by the Chief Conservator of the Victoria and Albert Museum, Mr. Norman Brommelle, in the British *Museums Journal*, for September 1961: "An institute of precisely this type, . . . has been successfully developed in the United States by Mr. Richard Buck, and has now been in operation for ten years. From a conservation centre at Oberlin College in Ohio he services the pictures for eleven museums over an area of about 1,000 miles diameter, i.e., about the size of Great Britain, geographically. This Institute, the Intermuseum Conservation Association (which was described in detail in 1956 in *Studies in Conservation*) is financed solely by contributions from member museums and has proved economically sound. . . . Some provincial museums in Great Britain already have their own conservation facilities, and these could be readily co-ordinated with a central scheme of this kind. So also could the small regional units which have already been discussed by members of the Museums Association. However, it is only by forming a fully equipped and fully manned central institute that expensive modern methods for diagnosis and treatment can be made generally available. Conservation work on this level would be quite outside the scope of area schemes. An organization of this type can be both efficient and financially sound."