

1064

5, No. 12

DECEMBER, 1958

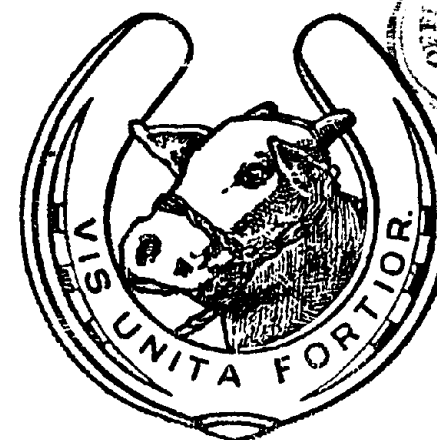
1064
4.58.

Special Number of the Silver Jubilee
of the Mysore Serum Institute
and
The Thirteenth All-India Veterinary
Conference

THE INDIAN VETERINARY JOURNAL

(The Journal of the All-India Veterinary Association)

*A Monthly Record of
Veterinary Science*



(ESTD. 1924)

OFFICE:

23, FIRST STREET, VIDYODAYA EAST, T'NAGAR,
MADRAS-17, (S. INDIA)

IL
KZm2, N24 1743

N58.35.12

79614

TO OUR CONTRIBUTORS

1. **THE INDIAN VETERINARY JOURNAL** is intended for the publication of papers on Original work, General and Clinical articles, Extracts, Reviews, Association News and other cognate matters pertaining to animal health and disease and the progress of Veterinary Science and the profession in general. The Editor, in his work of assessing papers received for publication, is assisted in an honorary capacity by a large number of Scientists working in various parts of India.
2. Papers are accepted for publication on the understanding that they have neither been published before nor are being considered for publication elsewhere.
3. Matter for publication should always be typed and sent in duplicate. The type-scripts should be on one side of the paper only with double spacing and one inch margin on the left side. They should be sent after careful revision and correction and without over-writings. Otherwise they are liable to be not considered.
4. Names of authors should be followed by their academic qualifications. Their official address or otherwise should also be stated to enable correspondents to communicate with them direct if they so desire.
5. The papers must be concise and not unnecessarily elaborate. To achieve this object extensive summaries of all available literature with numerous references should be avoided, wherever possible. *The bulk of the paper should record the actual work done by the author or authors.* If papers submitted are considered to be of excessive length, they may be returned to the authors for necessary reduction and re-submission. Papers are accepted subject to the right of minor editorial revision, if considered necessary. No reasons will be given in cases of non-acceptance of articles.
6. A copy of the page-proof will be sent to the author, only in cases where it is found necessary and it should be returned without delay, duly corrected. Extensive changes in the matter are not permissible at that stage.
7. Order for extra reprints should be placed at the time of the initial submission of the paper. Otherwise only the usual number of complimentary reprints viz. 10 will be sent to each author up to a maximum of thirty, irrespective of the number of authors over three.
8. Drawings and diagrams should be in Indian Ink on stout white drawing paper or on Bristol board.
9. A small number of blocks illustrating articles are normally paid for by the Journal; but the authors may however be required to pay the entire cost of blocks if they are far too many for a single article. Half-tone photographs should be included only when they are found essential and they should be on glossy paper, bringing out the differences clearly.
10. The number and size of tables, charts and plates should be strictly restricted as the cost of publication is mounting up every day. Coloured plates will not be reproduced, except under exceptional circumstances or when the author is willing to bear the entire cost.
11. Publication of group photographs of some news-value to the profession and of individuals will be undertaken only if space permits and the cost of blocks in such cases will be thankfully received from parties concerned.
12. Abbreviations and mode of references to Authors, years and journals should be on the model normally adopted in all international publications.

Note:—We request our Contributors to help us by observing the above rules, and they will then be facilitating early publication of their articles.

Vol. 35

December, 1958

No. 12

THE INDIAN VETERINARY JOURNAL

[THE JOURNAL OF THE ALL-INDIA VETERINARY ASSOCIATION]

PUBLISHED MONTHLY

★

A Monthly Record of Veterinary Science
Devoted to the cause of the
Veterinary Profession

★

EDITOR

Rao Sahib T. VINAYAKA MUDALIAR, G.M.V.C.,

Office:—23, First Street, Vidyodaya East, T'Nagar,
Madras-17, (S. India)

✱

All communications should be addressed to the Editor.

Advertisements should be in the hands of the Editor on or before the 15th of the previous month.

Subscription payable in advance	{	Rs. 8.00 per annum to Members of profession.
		Rs. 12.00 per annum to Government and all public institutions. Single copy Rs. 2.00.
		Foreign : 25sh. per annum. Single copy 3s. 6d.

[This Special Number Costs Rs. 3/-]

Members who do not receive the Journal regularly or who find it wrongly addressed are requested to communicate their correct address to the Editor at once. Non-receipt of a particular issue should be intimated before the close of that month.



The milk fever complex

The recurrent problems of milk fever and its complications call for rapid adjustments of calcium metabolism, and an associated hypophosphataemia and low blood magnesium level. In many instances, therefore, the symptom complex of milk fever can be treated by the subcutaneous or intravenous injection of M.F.C. Solution, which contains calcium, magnesium, phosphorus and dextrose.

M.F.C. SOLUTION

Detailed information is available on request

SUPPLIES Bottles of 350 c.c.



manufactured by MAY & BAKER LTD.

Distributed by: MAY & BAKER (INDIA) PRIVATE LTD. • BOMBAY • CALCUTTA • GAUHATI • MADRAS • NEW DELHI

When writing to advertisers, please mention *The Indian Veterinary Journal*.

A BRAND THAT NEVER WEARS BRANDING WITHOUT HEAT BRANDELUX

(DEVELOPED BY SHRI H. S. VAIDYA)

*A Scientific Chemical Compound for Branding Cattle,
Horses and Sheep with a Cold Branding Iron.*

THE MODERN BRANDELUX WAY

Compounded scientifically, according to the original formula, Brandelux is no new comer to the field of modern Branding. Thousands of Dairymen have found it the ideal way to Brand their Stock. Enough Brandelux has been sold to Rinderpest Schemes in India, for which it has proved indispensable. It is time tested, practical and economical.

1. For the best results always follow these simple but important Directions.
 - (a) Prepare site of Brand by brushing to remove dirt; or if necessary, clipping extremely long hair to permit the fluid to contact the hide.
 - (b) Stir Brandelux thoroughly to the bottom of the container each time before pouring.
 - (c) Pour out a layer of Brandelux not over $\frac{1}{2}$ inch deep into a shallow pan dish. Dip Branding Iron into the liquid taking care that the face of the iron is well covered.
 - (d) Remove Iron from liquid, allowing excess to drip back into the pan, and scrape any excess liquid from the sides of the iron if covered.
 - (e) Press iron firmly against animal, holding it in place long enough to ensure a complete impression. In the case of wide irons, a slightly rocking motion from left to right and top to bottom is advisable. Always re-dip the iron between each brand.

ADVANTAGES

1. The number comes out distinctly in about five minutes after application.
2. No after-care since the scab that forms peels off leaving a fine brand mark of a lasting nature.
3. Economical — with a lb. of material over 400 brand marks can be obtained.
4. Does not perforate or spoil the hide in any way.
5. Least painful to the animals.

Cirugia De Lux Private Limited

Head Office:

24, CHOWRINGHEE ROAD,
CALCUTTA - 13.

(PHONE : 23 - 5552)

Branch Office:

Bombay Mutual Annexe Building,
17, GUNBOW STREET,
FORT, BOMBAY - 1.

(PHONE : 26-3802)

Telegrams : "SURGIQUIP"

When writing to advertisers, please mention *The Indian Veterinary Journal*.

ADVERTISEMENTS

Introducing a new book-journal

"THE VETINFILE"

based on modern veterinary information written, produced & published in co-operation with the registered Veterinary Surgeons of England on:

1. Loose-leaf system of modern treatment for easy and constant reference.
2. Always kept upto-date with quarterly supplements published in September, December, March & June of every year, collected from the most important of the world's veterinary literature & presented in digest form;
3. Features will include specific diseases, with special reference to therapeutic measures of Cattle, Sheep, Horses, Goats, Pigs, Dogs & Cats,

Price Rs. 85.31 nP.

or the first edition plus the four quarterly supplements, payable in advance.

Send your orders with subscription to

BRITISH BOOK DEPOT

84, HAZRATGANJ, LUCKNOW (U.P.)

VETERINARY BOOKS

	Rs.	np.
ASDELL: Cattle Fertility & Sterility 1955 illd.	...	26 25
BVA: Handling of Animals and First Aid 1951 illd.	...	4 50
BODDIE: Diagnostic Methods in Veterinary Medicine 1956 illd.	...	16 62
DAVIS: Livestock Enterprises illd.	...	21 00
HAGEDOORN: Animal Breeding illd.	...	13 50
KAURA: Indian Breeds of Livestock 1957 (including Pakistan Breeds)	...	7 00
NICOLS: Livestock Improvement in relation Heredity in Environment 1957	...	11 00
STOVIN: Pedigree Cattle Breeding 1933 illd.	...	9 37
MAYNARD: Animal Nutrition 1956 illd.	...	37 50
GERARD: Meat Technology 1956 illd.	...	12 19
HEWITT: Feeding of Farm Animals 1953 illd.	...	33 75

SARCOR BOOK COMPANY

PALLIARAKAV ROAD — MATTANCHERI — COCHIN 2 (S. I.)

Veterinary Students' Aid Series

SRINIVASAN'S

1. Pharmacology, Materia Medica & Therapeutics the 4th revised edition, 800 pages. ... Rs. 14
2. A Treatise on Treatment (Vol. I: Clinical Medicine) contains also synopsis of Jurisprudence & Toxicology 384 pages. ... Rs. 8
3. A Treatise on Treatment (Vol. II: Preventive Medicine), 336 pages. Rs. 8

Copies can be had from:

SRI RAJSEKHAR BROTHERS,
PUBLISHERS & BOOK-SELLERS,
35, PATTAMANGALAM ST.,
MAYURAM (S.I.)

S. NAGARAJAN,
C/o V. SRINIVASAN,
(P.O.) BIHAR VETERINARY COLLEGE,
PATNA.

When writing to advertisers, please mention *The Indian Veterinary Journal*.

The Indian Veterinary Journal

(The Journal of the All-India Veterinary Association)

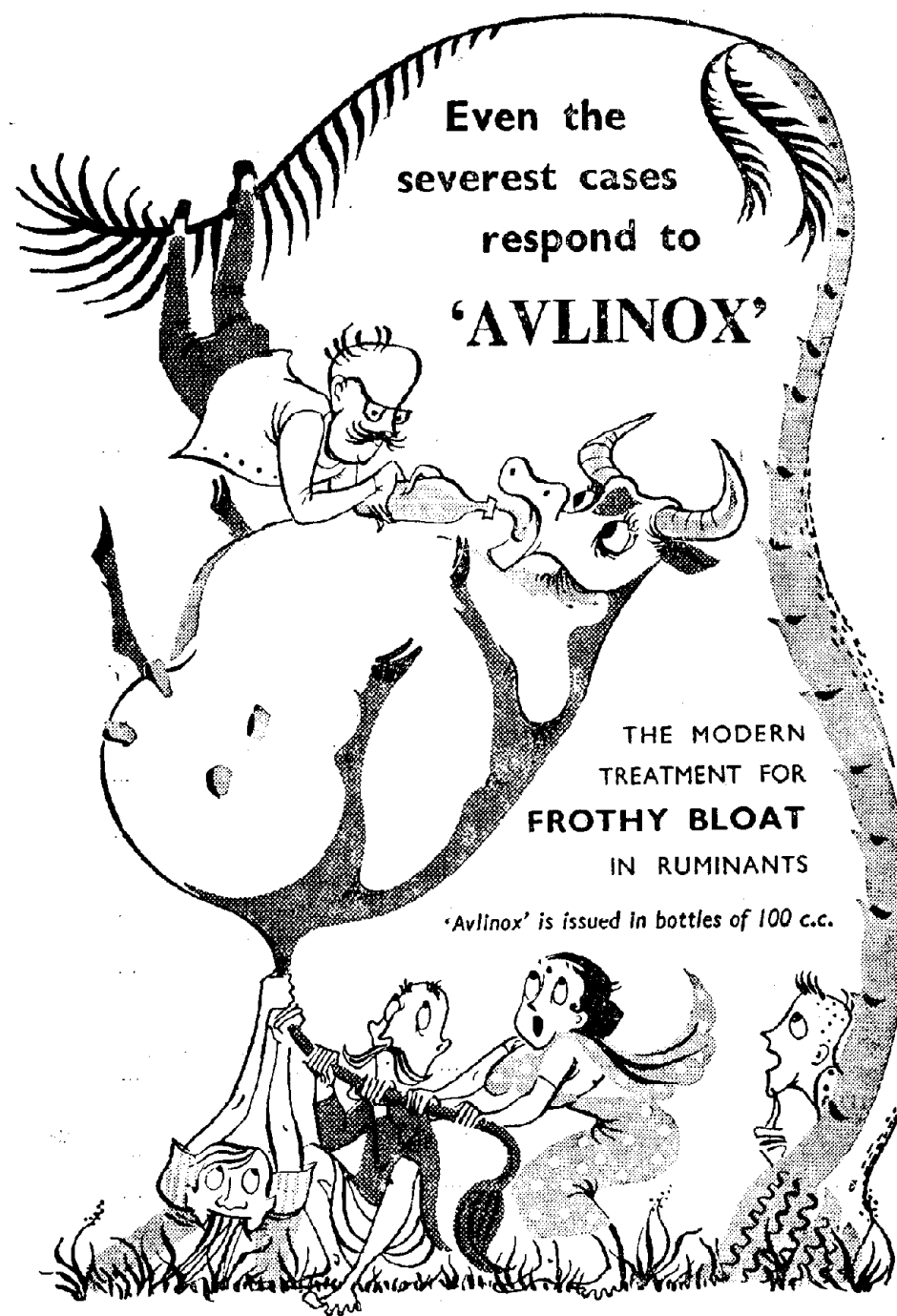
Vol. 35

DECEMBER, 1958

No. 12

CONTENTS

I. Editorial	PAGE
The Bangalore Conference	E-39
II. General Articles	
The Spleen of the camel in comparison to that of an ox.—By M. S. Purohit and Sohan Singh Rathor	605
The Thyroid Gland of the camel in comparison to that of an ox.—By M. S. Purohit and Sohan Singh Rathor	607
New District Livestock Farm in Ramanathapuram District.—By D. Pattabiraman	609
Studies on the strains of <i>Pseudomonas aeruginosa</i> (<i>Pseudomonas pyocyanea</i>).—By B. Narasinga Rai and S. G. Natarajan	612
Haematology in Ranikhet Disease.—By K. P. Chandrasekharan and R. Krishnan	616
Trypsin: Its use in intra-uterine infusion.—By M. R. Marathe P. V. Naik and M. N. Mannari	619
De-pluming itch in fowls caused by the feather mite <i>Megninia ginglymura</i> (Megnin)—A Preliminary note.—By V. S. Alwar, C. M. Lalitha and H. N. Achuthan	621
A Note on Cerebrospinal Nematodiasis as the probable cause of bone paralysis and its treatment.—By Dr. Syed Mohiyuddeen	624
Heavy mortality among suckling calves due to Foot and Mouth disease characterised by degeneration of cardiac muscle and its control by using anti-serum from convalescent animals.—By Dr. Syed Mohiyuddeen	625
III. Clinical Article	
Adenocarcinoma in the brain of a bullock.—By Dr. G. Biswal	627
IV. News and Views	631
V. Association News	
The Silver Jubilee of the Mysore Serum Institute and the Thirteenth All-India Veterinary Conference, Bangalore—Proceedings	634-631
The A.I.V.A. Reserve Fund—Notice of change of address of General Secretary	632
List of contributions received so far	633



IMPERIAL CHEMICAL INDUSTRIES (INDIA) PRIVATE LIMITED
Calcutta Bombay Madras New Delhi
Sole Distributors in India for
IMPERIAL CHEMICAL INDUSTRIES LIMITED, PHARMACEUTICALS DIVISION
WILMSLOW, CHESHIRE, ENGLAND

REV 534

When writing to advertisers, please mention *The Indian Veterinary Journal*.



His Highness
Sri Jayachamarajendra Wadiyar Bahadur, G.C.S.I., G.B.E.,
Governor of Mysore.



Sri LAKSHMI SAHAI, M.Sc., M.R.C.V.S.,
*Animal Husbandry Commissioner with the Government of India,
who presided over the Thirteenth All-India
Veterinary Conference.*

THE
Indian Veterinary Journal

(The Journal of the All-India Veterinary Association)

Vol. 35

DECEMBER, 1958

No. 12

**We Wish Our Readers
A Merry Christmas!**

Editorial

THE BANGALORE CONFERENCE

It was on the lips of everybody that the Thirteenth All-India Veterinary Conference at Bangalore was a tremendous success! We are not indulging in the usual conventional language when we describe the Conference as such. Only Mysore could have done it and she did it to the admiration of all concerned! Hats off to Mysore!

The Plenary session opened on the first day in the stately hall of Sir Puttanna Chetty Town Hall before a crowded house. It was regal in every sense of that term. As His Highness Maharaja Sri Jaya Chamaraja Wadiyar Bahadur, G.C.B., G.C.S.I., Governor of Mysore, accompanied by the Chief Minister of the State, Shri B. D. Jatti, B.A., LL.B., arrived at the Town Hall, the Maharaja's band which was in attendance struck the Mysore National Anthem and every one in and around the Town Hall, stood to attention. His Highness and the Chief Minister walked majestically over the red carpeted corridor, while the audience stood in silence and the strains of music filled the air.

After the usual invocation, the Chairman of the Reception Committee, Dr. K. S. Shetty, welcomed the audience and in doing so, traced the genesis, growth and development of the Mysore Serum Institute which "starting with the production of only two Biological products viz. the Rinderpest Bull Virus and Anti-Rinderpest Serum, is to-day manufacturing as many as fifteen Biologicals; and it is not only self supporting but is also realising a net income on an average of Rs. 75,000/- a year to Government". "The scientific section which was reorganised in 1935," Dr. Shetty claimed, "Can easily serve as a

Regional Centre for Veterinary Research in the south of India. *Inter alia* he mentioned "We have also raised a special fund called *The Mysore Serum Institute Silver Jubilee Fund*, which comes to Rs. 54,000/- to-day and the special Committee appointed by Government have decided to utilise the amount for construction of a permanent building for the State Veterinary Association". If so, Mysore will be the first State to achieve this distinction and we most heartily congratulate her.

Speaking of the All-India Veterinary Association, he said "To the Veterinary Profession in India, the Association has, thus, provided a common platform on the one side and a common Press through its Journal on the other. With these two powerful aids to progress the Association has been contributing a good deal in giving correct lead to the profession and shaping the course of events in the development of Animal Husbandry work in this country". Then he draws pointed attention to some of the achievements of the Association from national point of view and we only hope our readers will go through his speech carefully.

Next rising amidst a resounding applause, His Highness read out his inaugural speech in a measured tone, in the midst of pin-drop silence. "From times immemorial, cattle—both milch cattle and draught cattle—have held an important place in the economy of this country. They constituted the measure of wealth in ancient times, and even to-day the prosperity of our Agriculture is bound up with their health and welfare. The improvement of their breeds, the control of the diseases to which they are susceptible and a full appreciation of their value are subjects which should receive the greatest possible attention". His Highness further added "The progress of Veterinary Science in all its aspects, for which the All-India Veterinary Association is labouring with such devotion, is a matter of the greatest national importance, a vital matter in which so much yet remains to be done".

The importance of Veterinary Science in our land could not have been put up before the audience with greater clarity and firmness. In simple and yet dignified language, His Highness gave expression to a subject of high national importance and we are sure that the entire profession in India will feel thankful to His Highness for this open expression of his enlightened views.

Shri B. D. Jatti, the Chief Minister, who presided over the Silver Jubilee Celebrations said "To us in Mysore, it is a matter for particular pleasure and pride and that for the second time the All-India



SRI B. D. JATTI, B.A., LL.B.,
Chief Minister of Mysore.
who presided over the Silver Jubilee Celebrations
of the Mysore Serum Institute.



SRI K. F. PATIL, B.A.,
Minister for Agriculture and Forest, Mysore,
who is incharge of the portfolio of
Animal Husbandry and Veterinary Services.

Veterinary Conference should have chosen Bangalore as its venue. Most of you are aware, I presume, of the determined efforts being made by this Government for the provision of Veterinary facilities in the rural areas and also to spread the net work of preventive measures as closely as possible forestalling epidemics and preventing their spread. On the side of livestock improvement also, we are establishing Artificial Insemination Centres and also up-grading the local strains of cattle by the provision of pedigree bulls”.

Finally, the President of the Conference, Dr. Lakshmi Sahai, M.Sc., M.R.C.V.S., delivered his presidential address, which was listened to with rapt attention. As Animal Husbandry Commissioner with the Government of India, he spoke with authority and inside knowledge of the several schemes in force and of those proposed, at Government of India level. Hardly a subject was left out. The speech was thorough and exhaustive. He touched upon the Interim Indian Veterinary Council, the Key Village Scheme, Go-sadans, Gaushalas, Eradication of Rinderpest, Poultry, Sheep and Wool Development and Veterinary Education. Under future plans, he has given enough material for States to ponder over and take action if they are so inclined.

His reference to the All-India Veterinary Association is highly classical and will endure with times, as years pass on. He said “You will all agree that an Association of this type is the life and blood of every profession and it is, therefore the duty of each one of us to ensure that this Association of ours—this symbol of our brotherhood—continues to flourish and to serve as a bond not only among the several thousands of Veterinarians in the country but also between our own and sister professions and between our profession and the Government”. This is as complete a definition as one could think of and is a vigorous appeal to all doubting Thomases to put their shoulders to the common wheel. It is an advice, *par excellence*, that is bound to carry weight with the members of our profession. We commend the Presidential address to the careful study of our professional colleagues.

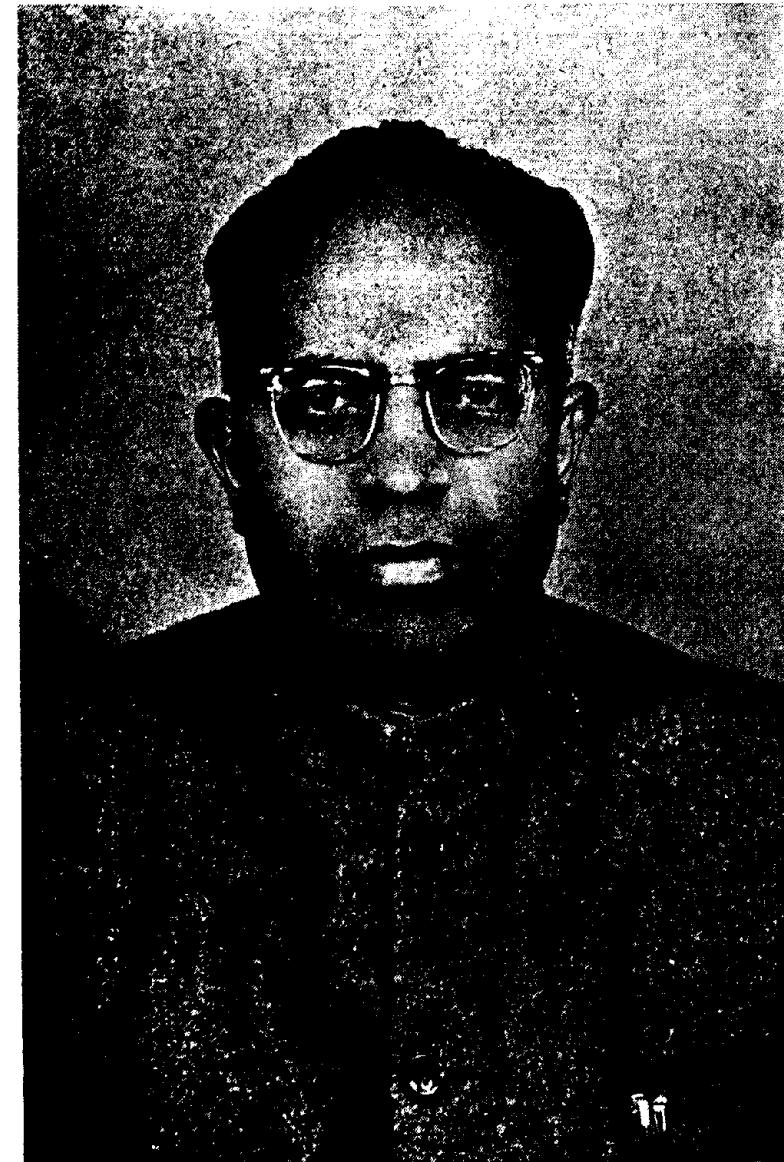
A detailed account of the entire proceedings with the speeches delivered, are published elsewhere in this issue. A few of the professional papers read also appear in this issue. We have tried our utmost to give as complete a picture as possible of this great session so as to benefit those who had not the good fortune to attend it. But yet we feel the picture is far from complete. All honour to Mysore!

THE
INDIAN VETERINARY JOURNAL

Ten good reasons why you should support it

1. It is a legacy from the pioneers of our profession.
2. It is your turn now to pass it on to posterity.
3. It has been championing the cause of our profession without fear or favour.
4. It is the only means of publication for our budding Scientists in our land.
5. It has a world-wide circulation and has earned a definite place amongst the scientific journals of the world. India's name is intertwined with it.
6. If you allow it to perish through lack of your support, you will only bring about a first rate calamity on the profession.
7. Many a profession suffers for lack of such a journal. Realise it in time and lend your support immediately.
8. It is a powerful weapon in the hands of the profession and none dare harm you as long as it lives.
9. You are what you are to-day because of your profession. It is your sacred duty to guard that profession through the *I.V.J.*
10. It is our mouth-piece. Don't silence it and make the profession dumb.

UNITED WE STAND, DIVIDED WE FALL!



Dr. K. S. SHETTY, G.M.V.C., Ph.D. (Edin.),
Director of Animal Husbandry and Veterinary Services, Mysore
and
Chairman, Reception Committee.



Sri G. A. HARDIKAR, G.B.V.C., P.G. (Mukt.),
Deputy Director, Mysore Serum Institute.

General Articles

THE SPLEEN OF THE CAMEL IN COMPARISON TO THAT OF AN OX

By

* M. S. PUROHIT, G.B.V.C. (Pat.) M.Sc., Ph.D. (Mich.)

** SOHAN SINGH RATHOR

Introduction

As there is no detailed description available on the gross and microscopic anatomy of the spleen of camel, which is a beast of burden in Rajasthan, the authors decided to conduct a thorough study of this organ.

Review of the Literature

Chauveau (1891) described that the spleen of the camel is not supported by the great omentum but only is adherent to the left side of the rumen and diaphragm. According to Lesbre (1903) the spleen of the camel is sickle shaped, greyish violet in colour and is less compressed than in solipeds. Leese (1927) described that the spleen of the camel is situated high on the left side of the upper surface of the rumen to which it is attached both in front and below, but it has no diaphragmatic attachment. He further described that it is crescentic in shape with rounded ends.

Materials and Methods

Five discarded army camels were embalmed and a detailed study of the spleen was conducted.

Gross Examination

The spleen of the camel differs greatly in its position from other domestic animals. The average weight of the organ is about 2 lbs., but the weight mainly depends upon the amount of blood contained in it. It is dark grey in colour, strongly curved and sickle shaped (Fig. No. 1). The average length of the organ is about 21" and the width is about 8", while the spleen of an ox according to Sission (1953) is elongated, elliptical in outline with both the extremities thin, rounded and similar in size. He further states that it weighs about 2 lbs., and is 20 inches long, 6 inches wide and 1 inch thick in its middle. The spleen of the camel is situated high up on the left side of the rumen to which it is attached

* Vice-Principal & Professor of Animal Husbandry, Rajasthan College of Veterinary Science & Animal Husbandry, Bikaner (India).

** Final Year Student of B.V.Sc. & A.H., Rajasthan College of Veterinary Science & Animal Husbandry, Bikaner (India).

by a small triangular area through peritoneum. It extends from the third lumbar transverse process to the seventh lumbar transverse process and practically reaches up to the pelvic inlet (Fig. No. 2). For general description, it has got two surfaces, two borders, two extremities and a hilus.

The Surfaces

The Parietal Surface :—It is convex and is related to obliquus abdominis internus muscle. In the centre it forms the renal impress on which the left kidney rests with a cushion of fat in-between while in ox the parietal surface is related to diaphragm.

The Visceral Surface :—It is concave and attached to the rumen on its dorso-posterior surface with a small triangular area (Fig. No. 1) which in ox, half of the visceral surface is attached to the rumen and a narrow adjacent area of reticulum.

The Borders

Lateral Border :—It is thin, convex and is irregular in general outline. There are marked indentations throughout the length of this border. Anteriorly it forms a prominent notch while posteriorly it terminates into a pointed end.

The Medial Border :—It is concave, thick and rounded upto the hilus, then it becomes thin up to the posterior extremity. The splenic artery enters the organ at the posterior third of this border. At the hilus the medial border is folded towards the parietal surface on which the left kidney rests making a renal impression.

The Extremities

The anterior extremity is thick and rounded with a constricted neck.

The Posterior extremity is thinner, flattened and tapers at the end.

The Hilus

It is a depression, situated in the lower third of the anterior border. It is wide and blood vessels are placed quite well apart while in the ox it is small, located on the dorsal third of the visceral surface and the artery and the vein are very close to each other.

Vessels and Nerves

The arteries are derived from the splenic artery and the vein lies below the artery. The nerves are derived from coeliac plexus of the sympathetic.

The Spleen of the Camel in Comparison to that of an Ox

BY M. S. PUROHIT AND SOHAN SINGH RATHOR.

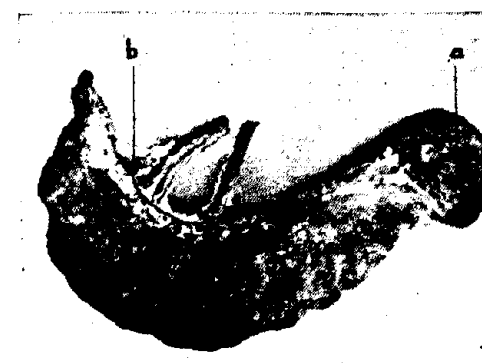


Fig. 1

Spleen of camel visceral surface.

a - Triangular area of attachment with rumen.
b - Hilus.



Fig. 2

Viscera of camel - Left side.

Lu. - Lungs. S. - Spleen.
10, 11, 12. - Last three ribs. K. - Kidney.
R. - Rumen.

The Thyroid gland of the camel in comparison to that of an Ox

BY M. S. PUROHIT AND SOHAN SINGH RATHOR.

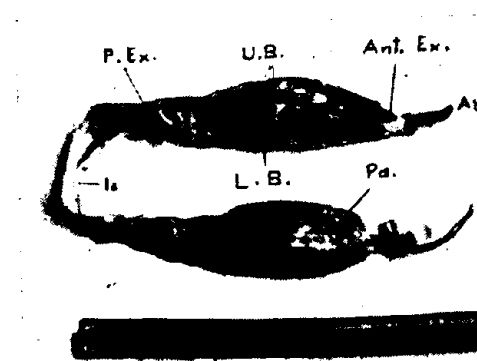


Fig. 1

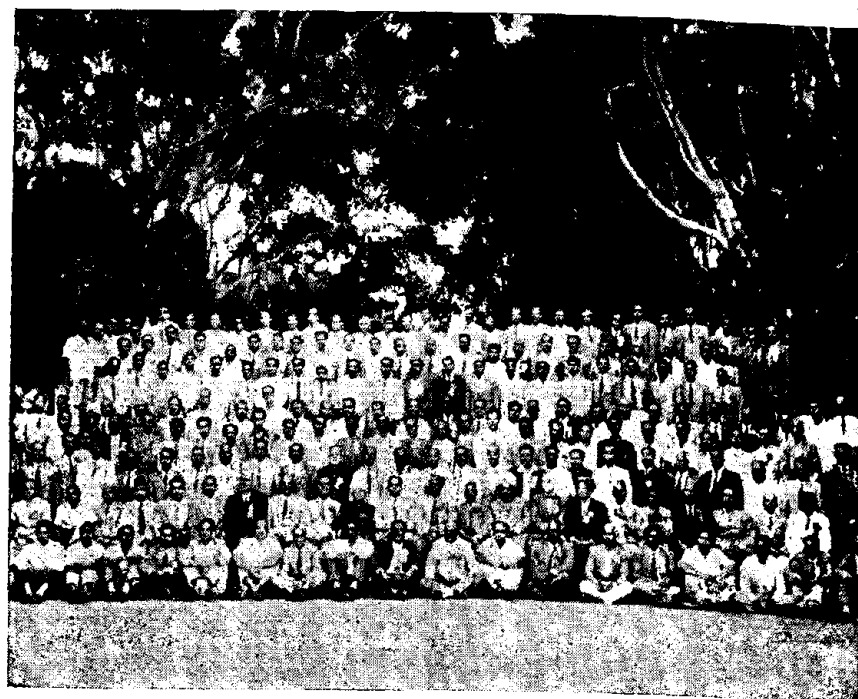
The Thyroid gland of the camel.

P. - Parietal surface.
U.B. - Upper border.
L.B. - Lower border.
Ant. Ex. - Anterior extremity.
P. Ex. - Posterior extremity.
Is. - Isthmus.
Pa. - Para-thyroids.
A. & V. - Artery & vein.



Fig. 2

Micro-photograph of Thyroid gland of a camel.
Fol. - Follicle.
Ct. - Connective tissue.
270 x



A Group Photo taken on the occasion of the Thirteenth All-India Veterinary Conference, Bangalore, 1958.

De-pluming Itch in Fowls Caused by the Feather Mite—*Megninia ginglymura* (Megnin)—A Preliminary Note

BY V. S. ALWAR, C. M. LALITHA and H. N. ACHUTHAN,



Fig. 1
An affected fowl.



Fig. 2
Megninia ginglymura (Megnin)
Male and female x 60.

[To face page 622]

REFERENCES

1. Chauveau, A. ... The Comparative Anatomy of the Domesticated Animals W. R. Jenkins, New York (1891).
2. Leese, A. S. ... A Treatise on the one-humped camel in Health and Disease. Haynes and Son, Stamford, England (1927).
3. Lesbte, F. X. ... Recherches Anatomique Sur les camlides J. B. Bailliere et Fils, Paris (1903).
4. Sisson, S. ... The Anatomy of Domestic Animals, W. B. Saunders, Philadelphia and London (1953).

THE THYROID GLAND OF THE CAMEL IN COMPARISON TO THAT OF AN OX

By

*M. S. PUROHIT, G.B.V.C. (Pat.) M.Sc., Ph.D. (Mich.)

**SOHAN SINGH RATHOR

Rajasthan, Veterinary College, Bikaner.

As there is no detailed description on the gross and microscopic anatomy of thyroid gland of the camel the authors decided to conduct a complete and thorough study of this gland. Five discarded army camels were killed and the thyroid glands were removed for study. The thyroid gland in camel is situated on the lateral surfaces of the trachea to which it is attached by means of fascia. It extends from vocal box to the third or the fourth tracheal ring.

It is elliptical in shape broadest where the upper third begins and tapering at both ends. The average weight of each lobe is 17.5 gm. length 4.6" and the width is 1.5" while according to Sisson (1953) the thyroid gland of an ox is triangular in shape, flattened, 3" long and 14 to 15 gm. in weight. It is dark brown in colour and consists of two lobes and a broad isthmus. Each lobe has got two surfaces, two borders and two extremities (Fig. No. 1).

The Surfaces

The Dorsal Surfaces :—It is convex and is related to the Omo-hyoideus and sterno-cephalicus muscles on this side. The parathyroids are embedded in the gland at the anterior extremity while in ox these are located at the posterior extremity.

Ventral Surface :—It is flat and slightly concave at the broadest part. On lower third of this surface is a lymph node (anterior cervical lymph node).

The Borders

The Upper Border :—It is convex and is in contact with oesophagus.

The Lower Border :—It is rounded, also convex and is attached to the trachea with fascia.

The Extremities

Anterior Extremity :—It is rounded. Here the artery enters and the vein leaves the gland.

Posterior Extremity :—It is pointed, tapers at the end and connects the two lobes through isthmus.

Isthmus :—It joins the two lobes of the gland and lies on either side of the trachea on the third or fourth tracheal ring. It is flat, thin, ribbon like in appearance, about 2.5" long and is creamy in colour.

Structure :—A thin fibro-elastic capsule covers the gland which sends its trabeculae to divide each lobe into lobules. The lobules are macroscopic. The lobules are finally divided into alveoli or follicles which vary in size. These alveoli are lined by low cuboidal epithelium and contain a viscid colloidal substance (Fig. No. 2). According to Trautmann *et al* (1952) in an ox the colloidal substance contains free epithelial cells while in the case of a camel there are no epithelial cells. The inter-lobular and inter-follicular connective tissues are scanty in comparison to those of an ox.

Blood and Nerve Supply :—The artery which supplies the blood to the gland is relatively large. It arises from the carotid artery and enters the gland at the upper extremity. The vein leaves the gland by the side of the artery. The nerve supply is from the sympathetic system.

REFERENCES

1. Sisson, S.: ... The Anatomy of the Domestic Animals. 4th ed. (1953), 554 P. W. B. Saunders Company Philadelphia and London.
2. Trautmann, A. and Fiebiger, J.: Fundamentals of the Histology of Domestic Animals, 1st ed. (1952) 138 P. Comstock Publishing Associates. Ithaca, New-York.

THE I. V. J. RESERVE FUND

Every brick in an edifice counts.

Let us have your Contribution, please!

NEW DISTRICT LIVESTOCK FARM IN RAMANATHAPURAM DISTRICT. (CHETTINAD P.O.)

By

D. PATTABIRAMAN, G.M.V.C., A.I.D.I.,
Director of Animal Husbandry, Madras.

The inauguration of the District Livestock Farm, Ramanathapuram district by Sri M. Bakthavatsalam, Minister for Agriculture and Animal Husbandry at Chettinad on 22nd August 1958 adds a new leaf in the history of the Animal Husbandry Department.

It is well known that the southern districts of Ramanathapuram, Madurai and Tirunelveli of Madras State are poor in livestock wealth, the type of cattle being in general non-descript and diminutive in size. The Livestock Improvement work in these districts is being done by grading up the local non-descript stock with approved pedigree breeding bulls for some time past, but for want of adequate number of breeding bulls, the entire area can not be covered for accelerated work. Further due to the vagaries of monsoon and unprecedented floods during the year 1955, the district of Ramanathapuram was subjected to heavy depletion of livestock also. Taking into consideration the backwardness of the district in the matter of livestock work and the after effects of the floods, it was decided by Government to open a Livestock Farm in Ramanathapuram district.

The success of a livestock farm depends mainly on the nature of soil for cultivation, availability of contiguous area of about 1000 acres, facilities like water, electricity etc. The question of acquiring areas of more than 1000 acres owned by private individuals was ruled out in view of the huge outlay involved. Therefore almost all the available forest poramboke areas near Srivilliputhur, Sivaganga, Mudukolathur, Surakkudi, Kalayarkoil etc. were inspected but none of them were found suitable for some defect or other. Finally an area of 1800 acres which was recently released by the Military authorities was found to be available in Chettinad where all the facilities required for the establishment of a farm were available.

This area is situated on the Karaikudi-Tiruchirapalli main road at a distance of about nine miles from Karaikudi and the nearest Railway Station is Chettinad. The area is a compact one falling within the revenue village limits of four villages of Pallathur, Kothadi, Kanadukathan and Kothamangalam and was taken over by this department on 26-3-57. The entire area was a shrub jungle at the time of taking over, with a few scattered trees mostly of white babul. In addition to the

above area of 1769 acres, it is proposed to alienate additional Government lands of 110.27 acres and also to acquire private lands of 26.57 acres so as to eliminate pockets. When this is completed the area of the farm will be about 1906 acres.

The boundary of the farm which runs to 14 miles in all was clearly demarcated after departmental survey and hedge plants were planted as a permanent demarcation apart from the usual survey stones. With a view for economy, compared to wire fencing throughout, the establishment of live fencing was taken up supplemented with wire fencing at vulnerable points.

Depending upon the general topography of the area, bunds and drains have been formed with a view to divide the area into convenient blocks and conserve the soil and drainage of surplus water. Contour bunding was also done particularly in the areas broken up for cultivation.

About 1000 saplings have been planted as avenue trees in appropriate places.

The reclamation of the land is being taken up gradually and in due course the entire area will be converted into pasture lands and necessary perennial grasses will be grown.

Water supply :—The entire district of Ramanathapuram can be classified as a poor rainfall area but a study of the rainfall data as recorded at Karaikudi for about a decade reveals that the average rainfall at this place is about 38.60 inches spread over in 57 days and this indicates that the area is however gifted with fair amount of rainfall.

The existing water sources at the farm are two tanks (*Uranis*). As this area had been lying waste for a considerable period, the inlets of these tanks had been closed and water had been diverted to other village tanks. Steps have been taken to renew the inlets for these tanks and to repair the tanks. One of the *Uranis* also appears to be having springs of its own and it is proposed to strengthen the tank by desilting. A detailed study of the probable water points was made and six bore points have been selected. At one point one big well of 30' diameter and 40' depth has been constructed and the bore has been left in tact so as to tap the deep spring also to the extent practicable. Trial borings are under progress at the other points.

Buildings :—At the time of taking possession of the area, there were a few dilapidated buildings which were in occupation by the military authorities. These buildings were fully utilised to the best advantage and converted for use at the farm by making suitable additions and alterations. Semi-permanent cattle sheds etc. were constructed departmentally in addition to the construction of drains and

culverts depending upon the water flow etc. at vulnerable points. The construction of permanent buildings and provision of electricity have been taken up with the Public Works Department.

Agriculture :—Improved types of grass seeds like Thin Napier and Kolukkattai have been introduced. During the season, Sunhemp, Cholam and other fodder crops are being grown.

A study of the indigenous flora was undertaken in collaboration with the Agricultural authorities and in all 28 plants were studied, 10 among them proved to be very useful forage plants. Studies on the general climatic conditions with particular reference to rainfall, topography of the area etc. have been initiated for formulating future crop husbandry and pasture husbandry practices.

Livestock :—The object of maintaining this farm is to have pure breeding of Kangayam and Tharparkar cattle and Murrah Buffaloes with a view to study the adaptability of these breeds in this area, so that in due course it will be possible to make available well acclimatised strains of bulls of the above breeds for grading up the local cattle in and around the area both for milk production and work.

It is also proposed to undertake selective breeding among the pure breeds and also if possible to do research for evolving a new type between Kangayam and Tharparkar breeds to suit the local conditions. It needs special mention that Tharparkar breed is being introduced in this State for the first time. The home of this Tharparkar breed is the Thar and Parkar deserts of Sindh, but has adopted India as its home which possesses the largest number of pedigreed herds. Like its sister breed, the Red Sindhi, it has good deal of the quality of adaptability but it could not spread itself wide enough in India because it could not be obtained in the same abundance as the Red Sindhi in the past. Though classified as a dual purpose breed, it has established itself better as a milch breed giving a milk performance record of 11,000 lbs. in 300 days. It is the promising breed of cattle for dairying purposes for the future, both in India as well as for other tropical countries. The size, hardiness and the general conformation and the milking qualities make this breed one of the most useful breeds in India.

As it is highly essential to grade up the local stock for more milk also, it has been decided to introduce this breed of Tharparkar in view of its milking qualities coupled with the general conformation and colour. Accordingly 21 Tharparkar animals purchased from the National Dairy Research Institute, Karnal (Punjab) which has got a fine herd of Tharparkars, are stationed at this newly opened farm. In addition 221 animals of Kangayam breed and 3 Sindhi animals were also

transferred from the Livestock Research Station, Hosur Cattle Farm to this Station as foundation stock. Arrangements have also been made to purchase some more Tharparkar animals for the foundation stock.

The farm presents a bright future with vast resources for livestock work. It will also study the general problems pertaining to livestock industry of the area with a view to suggest remedial measures wherever needed. This will also serve as a model and visual demonstration centre to the public, the extension workers and others connected with livestock improvement in the state in general and the area in particular on scientific management of cattle in all aspects of feeding, breeding, housing, fodder production and pasture husbandry. The adaptability of different varieties of fodder grasses in the area will also be taken up and acclimated strains of the same will be made available to the public in due course.

Lastly but not of least importance, the station will contribute to the general improvement in the nutrition of the area by the supply of wholesome milk and milk products, though to a limited extent.

STUDIES ON THE STRAINS OF *Pseudomonas aeruginosa* (*Pseudomonas pyocyanea*)

By

B. NARASINGA RAI AND S. G. NATARAJAN,
Madras Veterinary College

Introduction

The microorganism, *Pseudomonas aeruginosa* (*Pseudomonas pyocyanea*) was first isolated from "blue pus" by Gessard (1882) and from time to time, it has been recorded to be associated with numerous affections in man and animals. One of the common affections of this organism in man, is the middle ear suppuration in children. In animals this organism has been isolated from infected wounds, more particularly in swine. It has also been known to be a causative agent of mastitis in bovines, infertility in bulls, otitis in canines and cattle, enteritis, pneumonia and septicaemia in chickens and other affections in various species of animals.

The object of this paper is to record the isolation of strains of microorganisms of *Pseudomonas aeruginosa* species in pure cultures from affection of the external ear in canines, from materials received for bacteriological examination within a short period of 10 months.

Materials and Method

In most cases, sterile swabs charged with infective material from affected ears, were received from the College Hospital, field staff and from Dr. P. Krishna Rao, a private Veterinary practitioner at Madras. All the materials received were cultured on blood agar and nutrient agar media. In most cases, the causal organisms were obtained in pure cultures and these cultures were subjected to systematic studies in order to ascertain the characters of these and to compare with those of the typical pathogenic species, *Pseudomonas aeruginosa*.

History

In almost all cases, access to the history of the affection was possible. The affliction was of a chronic nature with a characteristic foetid smell. In all cases, pruritis was noticed with the formation of crusts as well as excoriation of the superficial epithelium of the ear canal. In 80% of the cases the history revealed that the animals were treated for the ear affection, with the usual antibiotics and sulpha drugs with some degree of relief, but the affection recurred soon.

Detailed Study of the Strains Isolated

In most of the cases, the organisms were obtained in pure cultures. All the strains showed the following characters.

Morphology and staining:—The organisms were motile, non-sporing, gram-negative rods with rounded ends, parallel sides and straight axis, arranged singly or in pairs and short chains.

Cultural characters:—Colonies on agar plates were round, smooth, moist, glistening, fluorescent, yellowish green in colour, entire edge, butyrous in consistency and easily emulsifiable.

On blood agar, colonies similar to agar, were seen and haemolysis was noticed.

In broth, they revealed abundant growth with thin surface pellicle and heavy sediment showing varying shades of colours from yellow to green.

Achromogenic strains were not detected.

Biochemical reactions:—All the strains when tested for the production of Indol proved to be negative. Methyl red and Voges Proskauer reactions were negative. When grown on Koser's citrate medium, all the strains grew well. None of the strains were able to produce hydrogen sulphide. Ammonia was produced by all. Nitrites were not produced from nitrates. All were capable of producing catalase. Methylene blue was completely reduced by all the strains. Litmus milk was reduced with the production of clot in 4 days. Gelatin

was liquefied by all except two strains. With the exception of one strain, all the other strains failed to ferment the usual carbohydrates.

The above characteristics compared favourably with those of the pathogenic species - *Pseudomonas aeruginosa*. However, further tests like pyocyanin production; ability to grow at $41^{\circ} \pm 1^{\circ} \text{C}$; ability to oxidise Potassium gluconate to a reducing compound, presumed to be Potassium 2 keto gluconate and the production of slime in a static culture in a medium containing Potassium gluconate, as the principal carbon source, were undertaken to identify and to type the various strains isolated with certainty.

Demonstration of pyocyanin production:—All the strains isolated were tested for their ability to produce pyocyanin. The technique followed, was on the lines adopted by Haynes (1951). The appearance of a red, water soluble pigment on the aqueous acid layer was accepted as the confirmation of the presence of pyocyanin. It was found that except three, all others produced pyocyanin.

Since varieties of *Pseudomonas aeruginosa* failing to produce pyocyanin may occur, it became necessary to subject the apyocyanogenic strains isolated, to further tests. Accordingly, all the strains including those which failed to produce pyocyanin were incubated at $41^{\circ} \pm 1^{\circ} \text{C}$. Growth was good with all the strains at this temperature. This test was followed by two other tests to determine the ability of the strains isolated to oxidise Potassium gluconate to Potassium 2-keto gluconate and the production of slime in a medium containing Potassium gluconate as the principal carbon source (Haynes 1951).

Pathogenicity:—Pathogenicity tests were tried on animals like rabbits, guinea pigs, mice and pigeons. A few strains at random were selected and 0.5 cc of a 24 hour old broth culture was given subcutaneously to the animals and pigeons. In each batch 60% of the animals succumbed and the organism was isolated from the internal organs. By means of the above detailed studies of the cultures, the authors identified the strains isolated as belonging to the typical pathogenic species, *Pseudomonas aeruginosa*.

Discussions

The vast literature on *Pseudomonas* reveals that the organism has been responsible for a variety of pathological conditions in different species of animals and man. But the authors were drawn to focus attention on the particular affection in canines. viz., otitis externa and its relation to this organism. In the course of 10 months in 1957, 68 materials from ear affections were examined of which, in 30 cases *Pseudomonas aeruginosa* species of organism was isolated. Again in most of these cases, they did not respond to the usual antibiotic and

sulpha drug therapy. In some cases, there had been temporary relief and the condition recurred soon.

It may be presumed that the temporary relief in some cases, is due to the destruction of concomitant organisms by the antibiotics introduced into the ear. It has also been reported that when the malady recurs, after temporary relief it usually shows profuse discharge and intense pruritis. This point may be explained as due to the unrestricted multiplication of *Pseudomonas*, in the absence of other micro-organisms which might have been either destroyed or inhibited by antibiotic therapy. The fact that ear affection does not respond to the treatment with customary antibiotics and sulpha drugs, indicates that the causative agent defies these drugs and *Pseudomonas aeruginosa* is well known for its resistance to these drugs. This organism is widely distributed in nature, being found in water, sewage, soil and dust and the opportunity of this organism gaining entrance into the ear canal and causing otitis is greater.

The 30 strains isolated are being subjected to further study, as regards their susceptibility or otherwise to the various antibiotics with a view to hit upon a drug that could be used as a safe and sure remedy. The results of these tests will be published soon after the completion of the study.

The efficacy of one per cent acetic acid in the treatment of otorrhoea in dogs caused by *Pseudomonas aeruginosa* will also be determined. Farrag *et al* (1953) recorded good results by this drug.

It has been observed by the authors that in many cases, treatment with autogenous vaccine prepared against the strain isolated, met with successful results.

Summary

(1) Thirty strains of *Pseudomonas aeruginosa* species have been isolated in pure cultures. The various tests to identify these as strains belonging to *Pseudomonas aeruginosa* species have been described.

(2) The resistance of this organism to sulpha drugs and other antibiotics has been discussed.

(3) Further work with a view to find out a suitable remedy for the malady is in progress.

REFERENCES

1. Aziz-ud-din, I. M. & Chandra- ... Madras Veterinary College Annual, 12, 17.
sekharan, K. P. (1954)
2. Birrell, J. F. (1945) ... British Medical Journal, 4411, 80.
3. Conc, J. F. (1939) ... Journal of Agricultural Research, 58, 141.
4. Essex, H. E. Mc Kenny, F. D. ... Journal of American Veterinary Medical
and Mann, F. C. (1930) Association, 77, 177.

5. Farrag, H. and Mahmoud, A. H. (1953) ... *Journal of American Veterinary Medical Association*, **122**, 85.
6. Gessard, C. (1882) ... *C. R. Acad. Science*, **94**, 563.
7. Haynes, W. C. (1951) ... *Journal of General microbiology*, **5**, 939.
8. Stafseth, H. J. (1940) ... *Poultry Science*, **19**, 126.
9. Wilson, G. S. and Miles A. A. ... *Topley and Wilson's Principles of Bacteriology and Immunity*, 4th Edition, (1955).

HAEMATOLOGY IN RANIKHET DISEASE *

By

K. P. CHANDRASEKHARAN and R. KRISHNAN,
Madras Veterinary College.

Introduction: Though Sharma and Seetharaman (1950) have studied the blood picture in artificially induced Ranikhet disease, very little information on the haematology in naturally occurring disease is available. Hence, a study was made in respect of an outbreak of Ranikhet Disease which occurred in young chicks of about 2½ to 3 months age.

Material and methods

The outbreak occurred during March 1957 in an experimental flock. The flock was composed of over 100 chicks aged 2½ — 3 months.

The disease ran an acute course, the chicks dying within 24–48 hours after the onset of the symptoms. During the later stages some of the chicks survived a little longer but were destroyed subsequently.

Autopsy was conducted on all the chicks that died and the disease was confirmed by Haemoagglutination-inhibition test and isolation of virus by inoculation into chorio-allantoic vein of developing chick embryo.

The data obtained included total red cell count, total and differential white cell count, haemoglobin concentration, sedimentation rate and packed cell volume. RBC and WBC count were made by phloxine-formalin method of Wiseman (Carl Olson Jr. 19). Differential stain using distilled water buffered to PH 6.8. Haemoglobin was estimated by Sahli Adam's Haemoglobinometer. Sedimentation rate and packed cell volume were estimated using the Wintrobe's haematocrit tubes after 1 hour and 10 minutes at 3000 r.p.m. respectively. From some of the figures absolute values were also worked out.

To compare with the normal figures, haematology in 10 birds of the same age group was also studied.

* Paper read at the 45th Session of Indian Science Congress.

Results

On comparison of the two Tables, it was seen that total red cell count was slightly raised during the course of the disease as also haemoglobin value and packed cell volume. There was reduction in the total white cell count.

Differential count also revealed a marked reduction in lymphocytes and significant increase in heterophiles. But the basophiles, monocytes and eosinophiles almost remained constant.

On comparison of the absolute values also, it was seen that there was decrease of mean corpuscular volume, mean corpuscular haemoglobin and mean corpuscular haemoglobin concentration.

Discussion

This paper agrees with the findings of the previous authors in respect of leucopenia and rise and fall of heterophiles and lymphocytes respectively.

However, the previous authors noticed reduction in haemoglobin concentration, total red cell count, sedimentation rate and packed cell volume all of which we find on the contrary to show a definite increase. Probably, this may be due to the fact that in this outbreak all the chicks had the peracute form of the disease. In all the birds excepting 3519 from which blood had been studied, severe catarrhal enteritis alone was noticed and it is but natural that when there is fluid loss in the early stage that haemo-concentration should occur. In chick 3519, it may be seen that the total RBC count, packed cell volume are much less than in the other birds and this bird showed diphtheritic patches in intestines on autopsy and as such was not the peracute type met with in other cases in this outbreak.

The mean Erythrocyte sedimentation rate in Ranikhet disease was found to be lower than in the normal and this might probably be due to erythrocyte concentration observed. It is well known that E. S. R. is inversely proportional to Erythrocyte concentration when other factors are equal. However it may be mentioned that this explanation has been disputed and is at variance with experimental data in other infections. This is because E. S. R. is primarily related to plasma protein changes and not to the haematocrit value.

Summary

1. Using standard methods, blood picture in 10 spontaneous cases of Ranikhet Disease in chicks was studied.
2. As compared with the figures taken from 10 normal birds of the same age, it was found that during the course of the disease, there

TABLE I
Figures in respect of Ranikhet Disease Chicks.

S. No.	Bird No.	Total red cell count millions per c.mm.	Total white cell count per c.mm.	Haemoglobin gms. %	Sedimentation rate mm.	Packed cell volume c.cm. per 100 c.cm. blood	Differential count				Mean corpuscular volume c.	Mean corpuscular haemoglobin r.r.	Mean corpuscular haemoglobin concentration %
							Hetero-phil	Lymphocytes	Monocytes	Eosino-phil	Basophiles		
1	2698	2.04	9000	6	2	22	70	23	5	2	1	23	52
2	2861	2.16	11000	8.5	2	30	72	20	4	2	2	27	28
3	2893	2.10	10200	8.5	1	30	70	24	4	1	1	27	28
4	2904	2.75	10000	7	1	27	71	25	4	1	1	25	26
5	2950	3.04	9000	8	1	30	70	25	4	1	1	25	27
6	2970	2.66	10000	8	1	32	72	24	4	1	1	25	26
7	2919	1.92	11000	7	3	22	74	20	4	1	2	25	32
8	2930	2.97	10000	8	1	27	75	20	3	1	1	27	26
9	2873	2.65	10000	7	2	26	70	22	4	2	2	25	27
10	2916	2.47	10000	6.5	1	25	68	25	4	2	1	26	26
Averages		2.72	10000	7.5	1.5	27	71	23	4	1	1	28	28

TABLE II
Following figures were obtained in respect of normal chicks of the same age group.

S. No.	Bird No.	Total red cell count millions per c.mm.	Total white cell count per c.mm.	Haemoglobin gms. %	Sedimentation rate mm.	Packed cell volume c.cm. per 100 c.cm. blood	Differential count				Mean corpuscular volume c.	Mean corpuscular haemoglobin r.r.	Mean corpuscular haemoglobin concentration %
							Hetero-phil	Lymphocytes	Monocytes	Eosino-phil	Basophiles		
1	3563	2.45	14000	8	2	25	45	45	8	1	6	32	32
2	3609	2.70	12000	8.5	2	26	26	64	8	1	2	31	33
3	3559	1.70	14000	6	3	21	34	56	7	2	3	35	29
4	3601	2.15	18000	7.5	3	24	40	54	3	1	1	35	31
5	3590	1.72	18000	6.5	2	21	24	65	7	2	2	34	31
6	3602	2.10	15000	7	3	23	47	47	8	1	3	33	30
7	3610	2.10	18000	7	3	23	47	49	8	2	2	33	30
8	3590	2.30	11000	7	3	26	42	50	6	2	3	30	27
9	3612	1.70	9000	5.5	2	20	33	62	2	2	2	32	28
10	3583	2.10	8600	7	3	24	47	42	7	2	2	33	29
Averages		2.10	13700	7	2.3	23	38	54	5	1	2	33	30

was a slight rise in total RBC count, haemoglobin value and packed cell volume and reduction in total white cell count and sedimentation rate.

Differential count of leucocytes showed marked reduction in lymphocytes and a significant increase in heterophiles. But the basophiles, monocytes and eosinophils remained almost unchanged.

REFERENCES

- (1) Sharma, G. L. and Seetha. ... *Ind. J. Vet. Sci.* XX, Page 203-209. raman, C. (1950)
- (2) Biester, H. E. and Schwarte, ... *Diseases of Poultry*, Iowa State College Press. C. H. (1914)

TRYPSIN: ITS USE IN INTRA-UTERINE INFUSION

BY

M. R. MARATHE, P. V. NAIK

and

M. N. MANNARI,

Veterinary Section, Aarey Milk Colony, Bombay.

[Read at the Thirteenth All-India Veterinary Conference, Bangalore, 8-11-53.]

The treatment of metritis in animals has undergone considerable changes during the past some years. The old therapy of repeated antiseptic douches has become obsolete. The giving of intra-uterine infusions of antibiotics, now forms the line of treatment. Due to the use of more potent drugs like penicillin, streptomycin etc. the treatment of metritis has led to a very satisfactory response. Even so, in some cases in which there is a considerable amount of tissue debris in the uterus, the complete involution is somewhat delayed. Such cases naturally require longer treatment. As increase in milk yield after calving is synchronous with the involution of the uterus, any delay results in the delay or even inability to reach the peak yield in optimum time. Such cases may account for several hundred pounds of milk lost, during a lactation. It is thus obvious that success of the treatment of metritis lies in achieving a complete cure in the minimum period possible. Actually the rate of increase in milk yield is a very reliable yard-stick to measure the success or otherwise of treatment.

Jordon (*The Veterinary Record* Vol. 69 Issue No. 4160, 1957) has reported the use of trypsin in the treatment of mastitis. Being an enzyme of proteolytic activity, it is claimed that its use with antibiotics helps in the resolution of the debris of protein nature in the uterus and thus allows the antibiotic to exert full bacteriostatic and bacteriocidal effect over a large area. Pockets of debris which impede the action of the antibiotics are thus cleaned and response to treatment improved.

Cases treated with antibiotics alone (no-trypsin)					Cases treated with trypsin along with antibiotics (trypsin group)				
Name of the disease	No. of cases	Treatment applied	Duration of treatment average in days	Results	No. of cases	Treatment applied	Duration of treatment Av. & range	Results	Remarks
1. Retention of placenta	8	Hibitane or Compron pessaries and subsequently treated with procaine penicillin 4 lacs & 1 gm. Streptomycin Intra-uterine.	10 (4-15)	3 reached full yield 4 reached 60% yield. 1 reached 50% of yield All reached on average 3 to 4 weeks time.	9	2 gm. trypsin. 1 gm. sodabicarb in 20 c.c. Intra-uterine and 1 gm. streptomycin 4 lacs, pro-penicillin.	3 (1-4)	6 reached full yield. 3 reached 75% yield. Both in 2 weeks time.	
2. Premature calving. purulent discharge, adherent placenta cleaned in 24 hours after calving.	3	— do —	7 (3-9)	3 reached 60% yield in 3 weeks time	4	— do —	2 (1-3)	3 reached 75% yield in 2 weeks time 1 reached 50% yield.	2 of the cases 10 gm.
3. Pyometra.	4	Evacuation of contents & procaine penicillin 4 lacs. 1 gm. streptomycin Intra-uterine.	5 (1-7)	8 reached 70% 1 reached 40% in a weeks time.	5	— do —	1-5 1 to 3	All reached peak yield in 4 days time.	
4. Metritis (following calving).	12	Procaine penicillin 4 lacs. 1 gm. streptomycin Intra-uterine.	9 (5-15)	2 reached full yield. 7 reached 70% yield. 2 reached 50% 1 did not respond.	10	2 gm. trypsin 1 gm. sodabicarb in 20 c.c. distilled water and penicillin procaine 4 lacs. streptomycin 1 gm. Intra-uterine.	4 (2-6)	4 reached full yield. 6 reached 75% yield.	
5. Endometritis detected in mid lactation.	4	Procaine penicillin 4 lacs. 1 gm. streptomycin Intra-uterine.	1-8 (1-3)	3 conceived to subsequent service 1 conceived after 2 services	5	1 gm. trypsin 1 gm. sodabicarb and procaine penicillin 4 lacs. 1 gm. streptomycin	1-5 (1-3)	2 conceived to subsequent service 2 for repeat services 1 did not conceive.	

On the above analogy it was decided to explore the utility of trypsin in the treatment of gynecological affections. Cases of retention of placenta, metritis, premature calving associated with metritis, pyometra and endometritis detected in midlactation, were treated in the present trial. At the Aarey Milk Colony, during 1958, 31 cases were treated without trypsin and 33 with trypsin in buffaloes. The number of cases of each category, the treatment applied, the duration of treatment, and the results are set out in the statement attached.

Discussion

It can be seen from the statement that the frequency of treatments and the period has been substantially reduced when trypsin was used in conjunction with antibiotics and/or chemo-therapeutic agents.

Trypsin was used in different doses ranging from 1 gm. to 10 gms. Our observation is that the higher dose did not evoke any adverse effects but there was apparently no advantage with such use. In these trials, 2 gms. of trypsin has given satisfactory results and seems to be adequate for most cases.

Summary

The consequences of delayed involution following purpural complications are described. The utility of the incorporation of trypsin with antibiotics in the treatment of metritis etc. is indicated with the relevant data.

DEPLUMING ITCH IN FOWLS CAUSED BY THE FEATHER MITE — *MEGNINIA GINGLYMURA* (MEGNIN) — A PRELIMINARY NOTE *

By

V. S. ALWAR, C. M. LALITHA and H. N. ACHUTHAN,
Madras Veterinary College, Madras.

A large number of the birds (about 60%) among the 220 Rhode Island Reds of the Demonstration Poultry Unit of the Madras Veterinary College began to lose their plumage during the later half of February 1958. Fowls aged from 2½ months to 3 years suffered from this complaint. The symptoms were manifest initially at the region of the tail, and consisted of loss of barbules, breakage of feather and falling of feathers either naturally or plucked out by the birds ultimately leading to loss of plumage at the tail region. Consequently areas of skin at the tail and the vent regions became bare. The lesions spread forwards to the back and sides giving the typical appearance of depilating itch. The birds with extensive lesions looked as if they were in moulting

* Read at the Thirteenth All-India Veterinary Conference, held at Bangalore in November, 1958.

period. Feathers on the head behind the comb and those on the neck were found affected in some fowls. The affected ones pecked at their bodies and plucked out the feathers. The bare skin in some revealed a picture of crusty dermatitis. As heavy infestation with *Lyponyssus bursa*, the tropical poultry Mite was noticed in the unit birds on previous occasions, all the fowls were dipped either in Sulphur or arsenic and sulphur emulsion. Since the above line of treatment did not give the desired result the Department of Parasitology of the College took up the investigation in the second week of June 1958. Examinations of the affected birds, feathers which had fallen on the ground as well as those plucked from the edges of the lesions and bedding in the poultry houses did not reveal macroscopically any parasite; but when such feathers were examined under microscope, a large number of mites was seen moving about very briskly along the barbs near the shaft and on it. They were commonly observed in clusters between the barbs adjoining the shaft at the base of the feather. Large number of eggs of these mites were seen either along the barbs near the shaft or on the shaft itself. Almost all the birds were found to harbour the mites and the infestation was heavy in the birds with lesions and moderate or light, in those looking apparently healthy. Thereafter, on a careful examination of the birds, the cluster of mites in the feathers and even those wandering on the skin were recognised macroscopically. The mites were identified as *Megninia ginglymura* (Megnin). As no other apparent cause for the loss of plumage could be detected, 16 birds with extensive lesions were dipped in a 0.05% aqueous suspension of Dieldrin as a trial. In about 10 days, feathers began to appear in the bare areas. No live mites were present and even the eggs became transparent. These birds were dipped again on the 15th day using the same insecticide. In a month's time, the bare patches on the skin were completely covered by feathers. Encouraged by the success of this treatment all the 220 birds in the unit were dipped in Dieldrin and thus the infestation was got rid of completely. The eggs of these mites found on the feathers did not hatch out also. After two weeks, the birds were dipped for the second time. In a month's time, feathers began to appear and within a total period of two months, all the fowls except a few looked quite normal indistinguishable from those which did not manifest the skin disease.

The recovery of this feather mite subsequently in three fowls attending College Hospital, from a chick of the poultry unit of the Nilgris District and from as many as 80 birds of the Poultry Research Station, Teynampet, all manifesting the skin lesion, points to its fairly widespread distribution in fowls in the Madras State.

Discussion

Three species of the genus *Megninia* (Family - Analgesidae) are known to infest fowls and they are *M. gallinulae*, *M. cubitalis*

and *M. ginglymura*. Newmann referred to *M. austernalis* (*M. columbae*) the feather mite of pigeons as a parasite of fowls also (Fleming, 1892). These feather mites are generally harmless and hence are considered as of little importance. However, Wickware (1921) described an unusual form of scabies in fowls in Canada caused by *M. gallinulae*. Lavoipierre (1958) reported about a case of depiluming itch in a fowl heavily infested with *M. cubitalis* in England. *M. ginglymura* though reported to be common on various species of birds, as turkeys, geese, ducks, pigeons, guinea-fowls pheasants, peacocks, partridges etc. throughout the world, records of infestation of fowls with this mite are not many. Reis (1939) found this mite only on 2 Rhode Island Reds out of 6353 fowls examined in Brazil. The health of the birds was not affected even by heavy infestation. Kaschula and Stephan (1947) recorded this feather mite in South Africa in fowls; but neither cases of gross infestation nor any pathogenesis were observed by them. In contrast to the observations of Reis (1939) and Kashula and Stephan (1947), we have found that *M. ginglymura* is associated with a disease condition in fowls resembling "depiluming itch". Our observations on *M. ginglymura* are similar to those of Wickware (1921) and Lavoipierre (1958) on *M. gallinulae* and *M. cubitalis* respectively. The heavily infested birds, besides losing their plumage, do not also thrive well. Such birds not only present a dirty appearance but also are not adequately productive. Studies on the life history of the parasite as well as on the incidence, pathogenesis and treatment have been undertaken and the results of these studies will form the subject of a separate paper.

Acknowledgment

The authors thank Dr. E. W. Baker of the United States Department of Agriculture, Washington, D. C. for the specific identification of the mite; Dr. Hall of the Commonwealth Institute of Entomology, London, for some of the references and Messrs D. Pattabhiraman, Director of Animal Husbandry, Madras, I. D. Mantramurthi, Deputy Director of Animal Husbandry, Madras and Bertie A. D'Souza, Principal, Madras Veterinary College, Madras, for the facilities given and the interest evinced in the above investigation.

REFERENCES

- | | | |
|--|-----|---|
| Fleming, G. (1892) | ... | Newmann's Parasites and Parasitic Diseases of Domestic Animals.—Bailliere Tindal and Cox, London. |
| Kaschula, V. R. and Stephan, S.A.R. (1947) | ... | Onder. J. Vet. Sci., 22.51. |
| Lavoipierre, M. M. ((1958)) | ... | Trans. Roy. Soc. Trop. Med. and Hyg. 52.300. |
| Reis, J. (1939) | ... | Arg. Inst. Biol., 10.147. |
| Wickware, A. B. (1921) | ... | Jl. Parasit., 8.90. |

A NOTE ON CEREBROSPINAL NEMATODIASIS AS THE PROBABLE CAUSE OF BOVINE PARALYSIS AND ITS TREATMENT

By

DR. SYED MOHIYUDDIN, B.Sc., G.M.V.C., B.V.Sc., Ph.D.
Disease Investigation Officer,
Mysore Serum Institute, Hebbal, Bangalore-6.

[Read at the Thirteenth All-India Veterinary Conference, Bangalore - 8-11-58.]

During systematic investigation of an obscure disease among bovines characterised by paraplegia and progressive paralysis, prevalent in some parts of Shimoga District of the old Mysore State, a detailed histopathological study of the brain and spinal cord of affected cases was made and presence of larval and immature forms of some nematode worm were detected in the brain and spinal cord of four acute cases of bovine paraplegia, associated with the lesions of necrotic encephalomyelomalacia. This finding of far reaching interest has already been published in the *Indian Journal of Veterinary Science and Animal Husbandry* and *Current Science*, as the probable cause of enzootic bovine paraplegia prevalent in some Malnad tracts of Mysore State. Further research on this line is continued and very recently histological study of the lumbar portion of the spinal cord of a cow from Sagar area, reported to have died of paraplegia, revealed cross sections of a well developed nematode worm in the white matter of the spinal cord. While making serial sections of the spinal cord, out of 57 histological sections of the anterior part of the lumbar enlargement of the spinal cord, in 19 sections clear cross sections of a nematode worm were observed. Further serial sectioning of the entire lumbar portion of the spinal cord is being continued. The exact species of the nematode has not been identified so far. The cross section of the worm has cuticle longitudinal and circular muscle fibres, lateral canals, dorsal and ventral grooves and alimentary canal. The structure of the nematode does not conform to any particular species of the filarid worm, and further study is needed.

As regards treatment, "Caricide" an antifilaricidal drug obtained from Lederle Laboratories, U.S.A. reported to be very efficacious in treatment of Cerebrospinal nematodiasis in Korea by Japanese workers was tried in the field. In Hosnagar taluk, 20 typical cases of bovine paraplegia were treated with caricide by administering 80 to 100 mgms per kilogram body weight of the animal. Out of 20 cases treated 18 recovered completely while 2 advanced cases did not improve with caricide treatment. As the cattle-owners of the enzootic area are anxious to get their affected animals treated only with caricide, arrangements

have been made to obtain the drug from U.S.A., for further field trials. Caricide being an antifilaricidal drug, naturally destroys the filarid worms but how the damage already caused in the brain and spinal cord by the larval and immature forms of the nematode could be rectified is not explainable. Besides, whether or not cerebrospinal nematodiasis observed in some cases of bovine paraplegia is the actual etiological factor, is yet to be confirmed by detailed histopathological study of brain and spinal cord of healthy animals from the area, as normal occurrence of nematode larvae and immature worms in abnormal places like central nervous system has already been reported.

HEAVY MORTALITY AMONG SUCKLING CALVES DUE TO FOOT AND MOUTH DISEASE CHARACTERISED BY DEGENERATION OF CARDIAC MUSCLE AND ITS CONTROL BY USING ANTI-SERUM FROM CONVALESCENT ANIMALS

By

DR. SYED MOHIYUDDIN, B.Sc., G.M.V.C., B.V.Sc., Ph.D.,
Veterinary Disease Investigation Officer, Mysore State.

[Read at the Thirteenth All-India Veterinary Conference Bangalore, 8-11-58.]

During the first week of March 1954, Foot and Mouth Disease broke out among cattle in Government Livestock Farm at Kurikuppi, Bellary District, Mysore State. Adults as well as young cattle at the farm were affected exhibiting typical symptoms and lesions of Foot and Mouth disease and were under usual symptomatic treatment. After about 3 weeks, when most of the adult cattle had recovered and were convalescing, suckling calves within 3 months of age, apparently healthy, started to die suddenly. The symptoms and lesions observed in the suckling calves were as follows :—

Almost all affected calves had invariably a rise in temperature varying from 103.5° to 106°F. but only a small number of them had a few foot and mouth lesions. There were 17 deaths in about 5 days' time and on post-mortem examination, in every calf, myocardium of the heart, was affected with degenerative changes and in a few cases, congestion of lungs and liver was also observed. As a routine investigation heart, blood and spleen cultures were made and myocardium, liver and lung tissues were subjected to histopathological examination.

Microscopical and cultural examination of the spleen and heart blood was found negative for specific bacterial or protozoan organisms. The histopathological examination of heart muscle revealed parenchymatous degeneration of the myocardium; cellular infiltration was observed in the place of degenerated cardiac muscle fibres. On the basis of

typical symptoms of Foot and Mouth, such as rise in temperature with salivation, a few ulcers on foot in the interdigital space and on the buccal mucosa, associated with parenchymatous degeneration of the myocardium, a tentative diagnosis of malignant Foot and Mouth disease in suckling calves was made and the heavy mortality and cause of sudden deaths were attributed to the parenchymatous degeneration of the heart muscle.

Since heart was involved in every carcass examined on post-mortem, more attention was given to ailing cases in maintaining the function of the heart avoiding exertion and excitement as far as possible and administering stimulant drugs like brandy and digitalis powder orally in drinking water and injecting subcutaneously camphor-in oil. This symptomatic treatment did not bring down the calf mortality. Therefore, antiserum therapy was adopted. Adult animals, which had recovered from a severe attack of Foot and Mouth and which were within 1 to 3 weeks of convalescent period, were selected and bled aseptically from the jugular vein. After allowing the blood for 24 hours at room temperature, serum was separated out. The serum, so prepared was presumed to contain a considerably high percentage of Foot and Mouth antibodies. Temperature for all suckling calves within 3 months of age in the farm was recorded daily twice and every calf having even slight rise in temperature, immediately was injected subcutaneously with 0.5 c.c. of the serum for every kilogram body weight of the calf. In cases of emergency the serum was injected intravenously.

In a few cases defibrinated blood instead of serum was also used but the dose was doubled. The use of serum was continued for 3 consecutive days. After anti-serum therapy, the mortality among suckling calves stopped immediately. Afterwards suitable material from fresh tongue lesion was not available for transmission experiments.

Similarly in the month of May 7, 1955 Foot and Mouth disease broke out in Military Dairy Farm, Hebbal; while adult cattle were in several stages of recovery, heavy mortality amongst young suckling calves was observed. The local Veterinarian suspected the condition to be some form of either H.S. or Anthrax. Heart blood and spleen material on cultural and microscopic examination were found negative for H.S., Anthrax or any other specific bacterial or protozoan organisms. Twenty-three young calves died within a period of a week but no mortality occurred in the adult cattle, although adult animals had a severe attack of Foot and Mouth. All the calves that died, on post-mortem examination revealed lesions in the myocardium which on histopathological examination was found to be of parenchymatous degeneration. To check heavy mortality among calves, immediate anti-serum therapy was adopted.

Blood was collected from convalescent animals within one to three weeks of convalescence. Serum was separated out and injected subcutaneously to every calf having rise in temperature in 0.2 to 0.5 c.c. for every kilogram body weight for three consecutive days. After this treatment, the mortality among calves stopped immediately. Further transmission experiments in experimental calves were not possible for want of suitable pathological material.

Clinical Article

ADENOCARCINOMA IN THE BRAIN OF A BULLOCK

By

DR. G. BISWAL, D.V.M. (Hons.), M.S., Ph.D.,
*Orissa College of Veterinary Science and Animal Husbandry,
Cuttack, India.*

A case of adenocarcinoma in the brain of a 13-year-old cross-bred Haryana bullock belonging to the Central Rice Research Institute, Cuttack, is reported.

Feldman (1932) says neoplasms, in general, are more common in cattle than in horses, or perhaps than in any other ruminants. He further states that carcinoma are extremely rare in the domestic cow. Runnels (1946) makes no mention of the occurrence of adenocarcinoma in the bovine brain. However, he states adenocarcinoma of the mammary, thyroid, prostate glands and of the liver are most common in dogs at the Iowa State College Clinic. Formad (1926) describes all the kinds of tumours found in domestic animals, but does not mention the occurrence of adenocarcinoma in the bovine brain. Chambers (1936) states that Sticker, in 1902, reported a tumour in the mammary gland of a cow but did not state the kind of the tumour. A case of carcinoma of the bovine mammary gland has been described by Elder *et al.* (1954). Jackson (1936) reports that bovine mammary cancers are extremely rare; while most of the authors think that they occur frequently in other species (Hutyra *et al.*, 1936). Semple (1895) reported encephaloid cancer occurring primarily in the testis and mammary gland of the humans. The common sites of adenocarcinoma are, however, stomach, large intestine, gall bladder, pancreas, uterus and prostate in the man (Boyd, 1948).

Perusal of the available literature reveals that very little information regarding the occurrence of adenocarcinoma affecting the brain is reported.

Case History

A 13-year-old cross-bred Hariana bullock belonging to the Central Rice Research Institute, Cuttack, was reported as developing protrusion of the eye balls associated with poor vision, for about 3-4 months prior to death. This bullock was specially trained to draw straight furrows along the lines previously made by the agricultural sub-overseer of the farm. When the bullock was found to cross the lines and draw irregular furrows he was suspected to be developing some trouble in the eye sight. As time passed on, the animal's vision became worse day by day. There was lachrymation. The protrusion of the eye balls became more pronounced. He was treated symptomatically for these complaints but they were of no avail, otherwise the bullock was perfectly alright and had maintained good bodily condition all through. Three or four months prior to death, the animal had shown on three or four occasions (as reported by the agricultural sub-overseer) nervous fits characterized by circling movement, always not in the same direction, temporary ataxia and then followed by dementia for while varying from 15 minutes to half an hour. The agricultural sub-overseer who was in charge of this animal, used to pour cold water over its head and body suspecting it to be a case of heat or sunstroke. Once the bullock fell down and remained demented for more than one hour, and thought dead by the agricultural sub-overseer. Six to seven days prior to death he became completely blind as judged by his inability to find his feeding and watering troughs in the shed. At times he dashed against the posts of the shed. Seeing this he was let loose in a large enclosure.

On July 13, 1954, while he was in the above spacious enclosure, the animal showed sudden nervous fits with violent circling movement followed by sopor and death. The above symptoms were observed at about 9-15 A.M. and the animal died at about 10 A.M. The P.M. Examination was done by the officer-in-Charge (G. Biswal) of the Orissa State Veterinary Laboratory, Cuttack at about 2 P.M. of July 13, 1954.

Gross Characteristics of some of the organs at P.M. Examination

Oozing out of blood and mucus from both the nostrils was noticed, leading to the suspicion of a case of Anthrax. On removing the skin, multiple areas of haemorrhage varying from petechiae to suffusions were seen on the left side of the chest and neck.

The lungs showed marked congestion and when cut open fluid exudate oozed out. Heart showed nothing abnormal.

Liver showed congestion. Kidneys were pulpy and the capsules were easily peeled off.

The brain presented a greyish manifold convoluted tumorous growth on the *cephalic* end of the cerebrum. The tumorous growth had gone deep into the ethmoidal processes anteriorly and cerebral cortex posteriorly. There were flattening of the gyri and paleness of the cerebrum at this area of growth. The meninges at this area were stretched so much that they were adherent to calvaria and were removed with difficulty. The weight of the tumour was 73.0 grammes. The optic nerves and tracts were markedly compressed. The other organs of the body were apparently normal.

Microscopical Characteristics

Tumorous growth :—The brain tumour was an adenocarcinoma, a malignant neoplasm composed of a fibrous matrix in which were found gland-like structures of tumour cells. At many places the glandular structure formation was lost and the tumour assumed a schirrhous form with much stroma. The cells are arranged in small and large groups with occasional attempt at papillary formation. The lining cells were several layers in depth at places and were not lined by the basement membrane; but had a tendency to invade the stroma. In the fibrous matrixial bed there was evidence of adequate blood supply together with distinct haemorrhagic areas.

The cells seemed to possess the characteristics of malignancy. The cells have hyperchromatic, regular round or oval nuclei with a prominent nuclear membrane and chromatin network. The cytoplasm is scanty and palestaring with H. & E. The cells were of epithelial type, exhibiting great diversity of form, being polygonal, round, oval, caudate or fusiform. Mitoses are seen in these cells.

Lungs :—Lung tissue showed marked congestion, oedema and severe haemorrhages. The pulmonary vessels were sclerosed. There was evidence of collapse. The bronchioles were filled with catarrhal exudate. The interalveolar spaces were filled with blood.

Heart :—Heart muscle did not show any abnormality, the striations were apparently normal.

Liver :—Intense intralobular capillary congestion in the liver and marked dissociation of the liver cells and arrangements of the lobules were found.

Kidneys :—Kidney showed intense fibrosis, intense fibro-plastic infiltration associated with interstitial nephritis.

Thyroid :—The follicles did not show any apparent abnormal picture.

Microscopical examination of blood and spleen tissue smears and cultural examination of the body fluids revealed no organisms.

Discussion

The violent nervous fits and dementia manifested by the animal during life were probably the effect of rise of intracranial pressure resulting from either the growth of tumour into the brain substance itself, the failure of the escape of the cerebrospinal fluid from the ventricles and subarachnoid space, gradual enlargement of the brain had brought the brain tissue into the immediate contact with the inner wall of the skull, or the temporary dysfunctions of the special areas of the brain.

Smaller tumours have no ill-effects upon the brain (Hutyra *et al*, 1946), but larger ones as big as a bean or larger, cause pressure atrophy of adjacent tissues and increase of intracranial pressure. The tumour as much as 73.0 grammes in weight growing in the cephalic end of the cerebra as reported herein was bound to cause cerebral disfunction.

The clinical and pathological findings of the tumorous growth are suggestive of an adenocarcinoma of brain, the occurrence of which appears to have very little been described in literature. Brain is not the primary seat of glandular carcinomata. However, there is the possibility of tumour from outside infiltrating the intracranial space. But it is difficult to locate the primary site of the tumour as the microscopic examination of a few organs like liver, kidneys, lungs, heart and thyroid failed to show any cancerous cells in them. Glandular carcinomata have frequently been described to occur in the thyroid gland (horse and dog), liver (ox and dog), mammary glands (dog), prostate (dog), kidneys (horse) and very occasionally in the stomach, intestine and bile ducts (Davies, 1949). In this case no attempt was made to collect tissues from stomach, intestines, pancreas, bile duct and hypophysis for a histopathologic examination.

The blindness was the result of the damage to the brain or the optic nerves by the tumour.

Conclusions

From the history of the case and microscopical findings it would appear that a 13-year-old bullock during the latter part of his life, developed an adenocarcinoma in the brain involving principally the cerebra and died of it.

Acknowledgement

Thanks are due to late Dr. P. R. K. Iyer, Research Officer, General Disease Investigation, Indian Veterinary Research Institute, Izatnagar and Dr. C. G. S. Iyer, Senior Research Officer, Tata Memorial Hospital, Bombay for their keen interest and co-operation in the preparation of this paper.

REFERENCES

1. Boyd, William (1946) ... A Text Book of Pathology. 5th Ed., Lea and Febiger, Philadelphia.
2. Chambers, Frank (1936) ... The Incidence of cancer in Domestic Animals. *Vet. Rec.* **49**, 693.
3. Davies, G. O. (1949) ... Gaiger and Davies—Veterinary Pathology and Bacteriology. 3rd. Ed., Bailliere, Tindall & Cox., London.
4. Elder, C., Kinter, L. D., and Johnson, R. E. (1951) ... Bovine Mammary Gland Carcinoma. *J.A.V.M.A.* **124**, 142.
5. Feldman, W. H. (1932) ... Neoplasms of Domesticated Animals. W. B. Saunders Co., Philadelphia.
6. Formad, Robert, J. (1926) ... Tumors of Domestic Animals. *U.S.D.A. Bull.* 1449.
7. Hutyra, F., Marek, J., and Manninger, R. (1946) ... Special Pathology and Therapeutics of the Diseases of Domestic Animals. Bailliere, Tindall and Cox., London.
8. Jackson, Cecil (1936) ... The Incidence and Pathology of Tumours of Domesticated Animals in South Africa. Onderstepoort *J. Vet. Sci. and Anim. Indust.* **6**, 3-462.
9. Runnells, Russell, A. (1946) ... Animal Pathology. Iowa State College Press, Ames, Iowa.
10. Semple, C. E. A. (1895) ... Essentials of Pathology and Morbid Anatomy. W. B. Saunders Co., Philadelphia.
11. Sticker, Anton (1936) ... Ueber den Krebs der Thiere insbesondere uher die Empfänglichkeit der verschiedenen Hausthierarten und uher die Unterschiede des Thier- und Menschenkrebses. *Arch. f. klin. Chir.* **65**, (1902): 616-696; 1023-1087. Cited by Chambers *Vet. Rec.* **48**, 693.

News and Views

U. S. Scientist found dead :—" Mr. Otto Harnung, United States International Geophysical Year Scientist, working alone on lonely Jarvis Island in the Pacific, was found dead from a heart attack. Officers from the Royal Naval landing ship Narvik, attached to the British Nuclear weapons base at Christmas Island, sailed for the island when Mr. Harnung's radio stopped answering on Friday (10th October 1958). He had earlier said he was ill. The ship reached the island on the 14th October 1958 night and officers waded ashore to find the great meteorologist dead. He had left part of his last weather report in neat hand writing". What a sacrifice in the cause of science! Surely truth is stranger than fiction, sometimes.

* * * *

Step-children :—The *Madras Mail*, a leading daily newspaper in the South in its editorial dated 8th November 1958, commenting on the recent All-India Veterinary Conference writes "The step-children of

the Government of Madras, as far as the administration is concerned, undoubtedly, are the departments of Agriculture and Veterinary, and yet so much is expected of them for the improvement of the agricultural economy of the State and indeed of the whole country."

* * * * *

"Long have there been complaints about the poorness of remuneration paid to Agricultural and Veterinary Graduates. Salaries and conditions of service have to be so improved that young men will be attracted. Why there should be such a wide differentiation between the emoluments of Medical men and Veterinary men is incomprehensible".

* * * * *

The *Mail* believes in forthright expression of opinion. It finishes by saying "Stop-gap measures are useless. Instead of step-children, these two should be the favoured sons of the family". How refreshing and how candid!

* * * * *

Science not inferior to Humanities, says Dr. K. S. Krishnan, Director, National Physical Laboratory. "Most educationists would concede to-day that the cultural value of sciences is in no way inferior to that of humanities and arts. This is not only in the case of pure sciences, but in the case of technology too". Let us hold our heads high!

* * * * *

Giants of old :—"Generations come and go, but the memory of great men remains and we should respect that memory, learn from it and at the same time try to think of them in the environment in which they lived and how they fashioned and conditioned it". So said Pandit Nehru speaking on Mr. Bepin Chandra Paul recently.

* * * * *

Better late than never! Obviously the Datta Committee report is published after so much of delay. We learn that it has recommended "that there should be a comprehensive legislation governing the location, construction and management of Slaughter Houses, meat inspection practices and all other allied matters". The Committee has also recommended the creation of "a permanent Central Committee for the development of meat industry".

* * * * *

The Committee seems to have further suggested to send a small team to U.S.A. and other advanced countries to study the organisation and working of Slaughter Houses and allied industries and also the organisation and functioning of the Veterinary Public Health Services.

The Committee appears to be of opinion that Slaughter Houses in large Cities like Bombay, Calcutta, Madras and Delhi should be modernised or re-built. We have asked for a copy of the report and we reserve our comments to a later date.

* * * * *

Regional Poultry Farms:—"Five Regional Cattle and Poultry Farms would be located at New Delhi, Bombay, Bangalore, Bhuvaneswar and in Himachal Pradesh", said Sri M. V. Krishnappa, Union Deputy Minister. "After three months training, students drawn from rural areas would be given 'foundation stock' to the value of Rs. 1000/- to start Poultry Farms in their respective areas". Quite good. But it all depends on the selection of right type of men, who would engage themselves in this industry whole-heartedly. Generally it is the rich men of 'rural areas' who knock away such benefits. Beware!

* * * * *

An All-India Cattle and Poultry Show will be held in South India at Bangalore, from 15th to 22nd February 1959. It would be the "biggest ever organised" said Sri M. V. Krishnappa. "Steps would be taken to bring a collection of all breeds from all parts of India". We wish the Show all success!

* * * * *

Pandit Nehru deplores spread of Disease of Gigantism" and he says "instead of big projects, small schemes will be more beneficial to people". India is a land of villages. The pattern of life is quite different from those in other countries. Our national economy is based on such factors. We are glad that Panditji has drawn pointed attention to this disease.

Some Don'ts

1. Don't fail to renew your subscription for 1959.
 2. Don't fail to clear your arrears of subscription before the current year closes.
 3. Don't fail to intimate immediately any change in your address.
 4. Don't fail to report non-receipt of a particular issue before that month closes.
 5. Don't fail to send in your subscription always in advance.
 6. Don't fail to contribute to the I.V.J. Reserve Fund.
-

The Silver Jubilee of the Mysore Serum Institute and The Thirteenth All-India Veterinary Conference

At Bangalore from 6th to 9th November 1958.

Proceedings

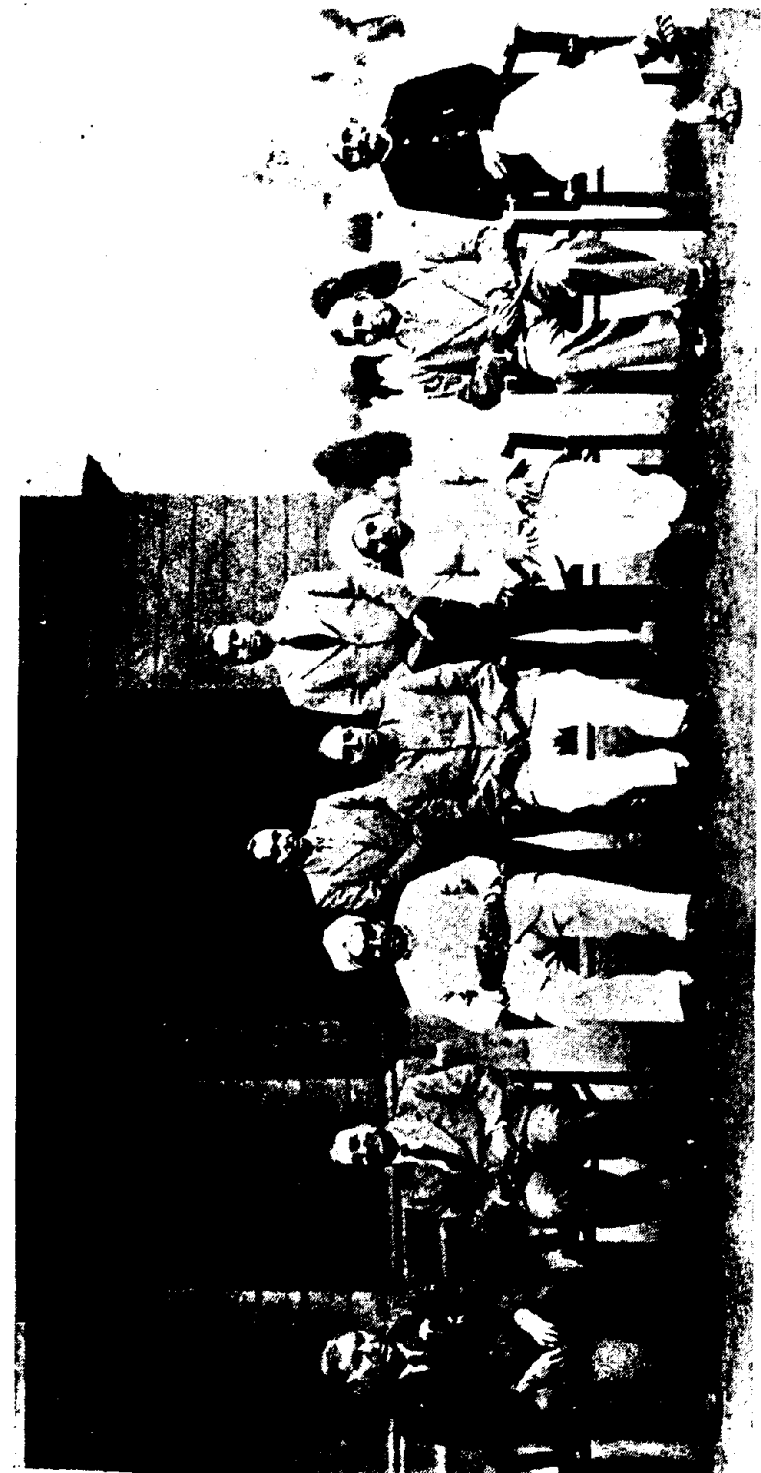
A combined session of the Silver Jubilee Celebrations of the Mysore Serum Institute and the Thirteenth All-India Veterinary Conference, was held at Bangalore from 6th to 9th November 1958. Mysore has always held a name for excellence but she has excelled herself where this session was concerned.

From point of attendance, grandeur, excellent arrangements made for the boarding and lodging of Delegates free of all cost, high level of discussion and the round of social functions arranged, Mysore has broken the record. The *esprit-de-corps* shown by all those who attended it, high and low, should serve as an eye opener to all those who are still in doubt as to the utility of such conferences. The sooner they discard the old ideas of prestige, of assuming the God and affecting to nod, the better it would be for this land of Bharat. It was a cosmopolitan gathering which had the stamp of culture on every aspect of its activities.

The combined session was held in three different places *viz.*, The Town Hall, The Lalbagh and The Serum Institute, so as to combine business with pleasure and give the visiting Delegates every possible convenience while attending to Conference work. Had this Conference been held at Hebbal, seven miles away from the City, as originally proposed, both the Reception Committee and the visiting Delegates would have been put to a good deal of inconvenience. As things turned out, the present arrangements were superb and left nothing to be desired.

First Day (6-11-'58) 4 P.M.

Sir Puttanna Chetty Town Hall put on a festive appearance with flags and festoons and that stately hall was crowded to capacity. His Highness the Maharaja's band, was in attendance. The mellowed lights and the red-carpetted corridor with the ornamental aristocratic chairs on the dais, brought to memory a forgotten era so full of oriental splendour and grandeur. Every body was in his/her seat long before the appointed hour, excepting the bright band of volunteers, students of the newly opened Veterinary College at Bangalore. They were all in their College uniform and appeared to be proud of their College insignia



THE MYSORE SERUM INSTITUTE SILVER JUBILEE COMMITTEE.



TECHNICAL STAFF OF THE MYSORE SERUM INSTITUTE.

on their green blazer coats. Their decorum and discipline came in for a good lot of appreciation.

The Mysore National Anthem announced the arrival of His Highness the Governor and the Chief Minister of the State. The whole audience stood to attention. They were received by the Chairman of the Reception Committee, Dr. K. S. Shetty. The following gentlemen were then introduced to the honoured guests. Dr. Lakshmi Sahai, Dr. M. S. Sastry, Dr. T. Vinayaka Mudaliar and a few other members of the Silver Jubilee and Reception Committees. To the accompaniment of fine music His Highness and the Chief Minister wended their way to the dais, acknowledging the salutations of the great gathering.

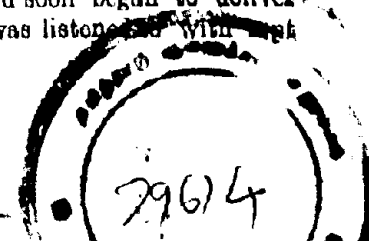
The invocation song by two charming little girls, Kumari Sunanda and Kumari D. Ambuja, B.A., was very much appreciated. The next item, though a little novel perhaps, was quite appropriate. It was *Stutimalika* or "the garland of worship" in honour of the Royal family of Mysore, the presiding deity of the State, the great Chamundeswari, the Cattle Wealth of Mysore in general and the Go-matha in particular. It was an excellent piece of Kannada poetry, specially composed for the occasion by Sri K. S. Dharanendraya and many of the local citizens who knew the language were lost in ecstasy.

Then began the regular programme of the Conference with the reading of the Welcome Address by Dr. K. S. Shetty (Appendix I). This over, H. H. the Governor of Mysore, began to deliver his inaugural address (Appendix II) when he was garlanded with a gigantic and artistic flower garland which gave the finishing touches to this highly regal function. His Highness could be heard clearly even at the remotest corner. In such measured tones, His Highness gave expression to sentiments highly flattering to the profession. His reference to the All-India Veterinary Association "as labouring with such devotion for the progress of Veterinary Science in all its aspects" will ever be cherished by the profession.

Next the Chief Minister was garlanded and he delivered his Silver Jubilee Presidential address (Appendix III). His Ghandian simplicity and deep look of sincerity in his eyes, impressed the audience very much.

Finally the President of the Conference Dr. L. Sahai got up to deliver his address but he was soon lost in the meshes of a gigantic garland. He was quick to extricate himself and soon began to deliver his presidential address (Appendix IV) which was listened to with great attention.

3L
KZ m2, N2-4
NS8-35-12



Dr. G. A. Hardikar, Deputy Director i/c The Mysore Serum Institute was now on the scene with sheaves of telegrams and letters in his hand. But he made a good job of that work, read most of them, announced the rest and soon retired.

Dr. R. D. Nanjiah, the Reception Committee Secretary in proposing a vote of thanks spoke as follows:—

Ladies and Gentlemen,

In such an atmosphere of mirth and grandeur, I feel it is a privilege to be called upon to express on behalf of the Reception Committee, our great pleasure.

Sir, I indulge in no form of convention when I say how grateful, how elated, how honoured, we the members of the Veterinary profession feel by your consent to inaugurate this historic event of two fold importance. With your permission, your Highness, I avail of this opportunity to express our gratitude and respectful thanks for consenting to honour this memorable occasion with your presence in spite of multifarious engagements, national and international.

It is a source of utmost gratification to us that our Chief Minister Shri B. D. Jatti, a man of action, of inexhaustable energy, is amidst us. I extend to you, Sir, our respectful thanks for having kindly consented to preside over this Celebration. Our unassuming and quiet Minister Sri K. F. Patil has been a tower of strength ever since he occupied the present exalted position. It is a pity that he is not able to be amidst us this evening due to unavoidable circumstances. We tender our respectful thanks to him.

We are extremely happy that the torch bearer of the Veterinary profession in our country, Sri Lakshmi Sahai has taken the trouble of coming from the Indian Capital to this beautiful City of Gardens, to guide us in our deliberations. We tender our hearty thanks to you, Sir.

Our thanks are due to the pillar of our profession Dr. M. S. Sastry, who has worn himself out to this present condition by his hard toil to the Veterinary profession. We respectfully offer our thanks to you, Sir.

How anybody in my position here could retire from this place without acknowledging the services rendered by the members of the Silver Jubilee Committee constituted to concert measures for the celebration of this function and the organisations, local bodies and philanthropists who have helped us to collect the target amount of Rs. 57,000/- towards the Silver Jubilee Fund? The Silver Jubilee building to be constructed in commemoration of this function at the site granted by our benign Government will always stand as the land



THE MYSORE SERUM INSTITUTE, HEBBAL, BANGALORE.



DR. R. D. NANJIAH,
B.Sc., G.M.V.C., B.V.Sc., Ph.D.,
(Professor, Veterinary College),
Secretary, Reception Committee.



SRI D. N. VASUDEVA MUDALIAR,
G.M.V.C.,
(Assistant Director, H.Q.),
Secretary, Reception Committee.



SRI C. D. KALAPPA, G.V.Sc., M.S.,
Dairy Development Officer,
Treasurer, Reception Committee.



SRI V. S. KUPPUSWAMY MUDALIAR,
G.M.V.C.,
(Retired Superintendent,
Mysore Serum Institute),
who is the newly elected
General Secretary of the A.I.V.A.

mark of their great help and services. This memory will inspire us for all time to come.

Please allow me to express our sincere thanks to the Government of Mysore, to the Presidents and members of the various Sub-Committees and staff of the different departments, whose guidance and suggestions were of immense help to us in running this function in such a successful manner.

May I take this opportunity to thank our leader Dr. K. S. Shetty, who has been a tower of strength to us and for his valuable guidance and suggestions in making this function a grand success.

Indeed this Silver Jubilee Celebration is a fitting climax to the labours and achievements of the workers and well-wishers of this institution. On behalf of the Committee I thank them for their meritorious services. I hope the delegates who have come from different parts of the country will have a fine time and nice stay in this beautiful City and I earnestly request them to kindly overlook any short-comings that can easily occur in functions of this magnitude. Once again I sincerely thank you all, Gentlemen, for the wonderful co-operation and help you have so nicely extended.

I thank you all, Ladies and Gentlemen, for the kind response you have made to our invitation.

Next the National Anthem over, the audience began to disperse for a while, to meet again for the cultural programme. 'Bharathanatyam' by Kumari R. Chitralekha was very much appreciated. Equally entertaining was the orchestra by students of Karnataka College of Music.

This brought the first day's session to a close amidst scenes of great jubilation and expectation for the morrow.

The list of delegates present is given in Appendix V.

Second Day (7-11-'58) 9 A.M.

The session was held in the Glass House in Lal Bagh. The visiting Delegates were taken up with the scenic effect of the location of this building in the midst of an enchanting botanical gardens. After prayer, the proceedings began exactly at 9 A.M. The morning session, which lasted till 1 P.M. was purely a scientific session, when the following professional papers were read and discussed:—

1. Cerebro spinal Nematodiasis as the probable cause of Bovine paralysis and its treatment.—By Dr. Syed Mohiyuddeen, B.Sc., G.M.V.C., B.V.Sc., Ph.D.
2. Malignant form of Foot and Mouth disease in suckling calves characterised by degeneration of cardiac muscle and its

treatment with Anti-serum from convalescent animals.—By Dr. Syed Mohiyuddeen.

3. Intensive treatment of Nasal Schistosomiasis in cattle.—A preliminary report—By Dr. V. S. Alwar, G.M.V.O., B.V.Sc., M.Sc.
4. Trypsin : its use in Intra-uterine infusion by Dr. M. R. Marathe, Dr. P. V. Naik and Dr. M. N. Mannari, Aarey Milk Colony, Bombay.
5. De-pluming itch in fowls caused by *Megninia Ginglymura* by Dr. V. S. Alwar.

Interesting discussion followed on each paper and the President's remarks on each paper were quite informative and useful. Dr. W. F. Guard, D.V.M., the T.C.M. Expert Adviser in Surgery, now assigned to the Veterinary College at Bikaner and who took immense interest to attend the conference was next requested by the President to address the gathering. He conveyed the greetings of the veterinary profession in America and expressed his happiness to be present at this All-India Veterinary Conference. He traced the history of Veterinary organisations in the U.S.A., and said that we were not far behind them. He thanked the President for having given him an opportunity to address the gathering.

Next a Subjects Committee was formed. It was here the good sense of the entire house was fully evident. The loyalty and high sense of discipline shown by the members of the profession were really praiseworthy. There is nothing to covet in becoming a member of the Subjects Committee. A list of names prepared after due consideration, quite representative of several regions, by the elders of the profession was put up before the house for their adoption. There was not a single dissentient voice. To a man everybody approved of the names and Mysore again set an example to others. It sometimes happens that endless number of names are proposed, eliminated, voted for or against and meaningless discussion and confusion ensue, wasting much of the valuable time of the Conference, when the Conference itself is hard pressed for time in all directions. Such an unseemly sight was not staged at Bangalore and we commend this procedure at all future gatherings as well. The following members were duly elected for the Subjects Committee.

- | | |
|---|------------------------------|
| 1. President of the Conference. | } <i>Ex-officio Members.</i> |
| 2. President of the Association. | |
| 3. General Secretary of the Association. | |
| 4. Chairman, Reception Committee of the Conference. | |
| 5. Secretary of the Conference. | |



Dr. K. S. Shetty delivering his welcome address.



A view of the distinguished gathering.



Dr. T. Vinayaka Mudaliar, G.M.V.C., General Secretary of the A.I.V.A., proposing a vote of thanks.



Dr. W. F. Guard, D.V.M., T. C. M. Expert Adviser, Veterinary College, Bikaner addressing the gathering.

CONFERENCE PROCEEDINGS

639

6. Dr. K. S. Nair (Kerala)
7. Dr. M. N. Menon, "
8. Dr. V. S. Alwar, (Madras)
9. Dr. C. R. Krishnamurthy, "
10. Dr. V. G. Khare, (Bombay)
11. Dr. Sharma, "
12. Dr. M. Mahalingam, (Andhrapradesh)
13. Dr. C. G. Bhaskar, "
14. Dr. A. Chatterji, (West Bengal)
15. Dr. B. J. Banerji, "
16. Dr. K. S. Krishnappa, (Mysore)
17. Dr. G. N. Srikantiah, "
18. Dr. V. M. Kotbagi, "

The Conference adjourned for lunch at 1 P.M., to meet again at 3 P.M. In the meanwhile the Managing Council of the All-India Veterinary Association met at 1-30 P.M. to scrutinise and pass the reports of the A. I. V. A. and of the I. V. J. to be placed before the Conference. The Subjects Committee met at 2 P.M., to consider the various resolutions put up and admit them to be placed before the Conference.

It was nearly 4 p.m. when the general session assembled again with Dr. L. Sahai in the Chair. The following resolutions were duly considered and adopted.

1. This Conference records its deep sense of sorrow at the sad demise of Doctors P. B. Krishna Iyer, D. S. Laud, R. M. Kalapesi, G. G. Oka, L. M. Hira, S. T. Khambete, Syed Miruddin, G. Krishna Urs, Jagannath, G. Zechariah, L. S. Parameswara Iyer, Rangamannar, Nargunam Nadar and G. Ramanujachari and conveys its heartfelt condolences to the members of the bereaved families.

(Moved from the Chair, all standing in silence).

2. This Conference requests the Central and State Governments to make the maximum use of the facilities offered under the different foreign aid programmes and also of the facilities available within the country for giving specialised training to Veterinarians for manning the various posts which are likely to be created in connection with Animal Husbandry development projects during the Second and Third National Plan periods.

Moved by Dr. V. S. Alwar. Seconded by Dr. G. Osman Khan.

3. This Conference reiterates its resolutions passed at the 10th, 11th and 12th All-India Veterinary Conferences with regard to the necessity of nominating representatives of Veterinary Science on the Legislative Councils of the States and the Rajya Sabha, to assist in the development of Animal Husbandry work, which is of urgent national importance in the production of high quality protective foods and to promote health and prosperity of the nation.

This Conference requests the Government of India and the State Governments to take immediate action to nominate Veterinarians to Rajya Sabha and the Legislative Councils.

Moved by Dr. R. D. Nanjaiah. Seconded by Dr. G. N. Srikantiah.

4. This Conference reiterates the resolution passed at its previous Conferences and strongly urges that the inspection of animals tendered for slaughter (both ante-

mortem and post-mortem) should be entrusted only to Veterinarians as they are the only persons qualified to carry out such work.

Moved by Dr. G. N. Sreekantiah. Seconded by Dr. G. Osman Khan.

5. Resolved to request the Central Government to establish an All-India Veterinary Service on par with the other All-India Services such as I.A.S., I.P.S., I.A. & A.S., etc.

Moved by Dr. V. S. Alwar. Seconded by Dr. Syed Mohiyuddeen.

6. This Conference reiterates the Resolution No. 7 passed at the 12th All-India Veterinary Conference, Madras, viz. "This Conference learns with deep concern that in Uttar Pradesh there is a disparity between the scales of pay of the Veterinary Graduates of the Agra University and those of the Veterinary Graduates from other Universities with comparable qualifications, and therefore it resolves to request the Government of Uttar Pradesh to grant the same scale of pay to Veterinary Graduates of all Universities without any such distinction."

Moved by Dr. V. S. Alwar. Seconded by Dr. C. R. Krishnamoorthy.

7. The Royal Commission on Agriculture, 1927, has fixed that provision should be made for the services of one Veterinarian for every 25,000 head of cattle in view of the work, then expected of the Veterinarian being only prevention and control of contagious diseases and treatment of sick animals, whereas the work of the Veterinarian now includes various activities, such as animal breeding, animal nutrition, dairying, poultry, goats and sheep development etc. This Conference is, therefore, of opinion that the above target needs to be revised immediately so as to bring about rapid improvement in the expansion of State Veterinary Departments.

Moved by Dr. G. N. Srikantiah. Seconded by Dr. D. N. Vasudeva Mudaliar.

8. This Conference brings to the notice of Government of India and State Governments that since the urgency for two year course trainees has been tided over to a large extent, the question of continuing such short courses requires to be reconsidered so as to avoid difficulties and complications that had already crept in.

Moved by Dr. H. R. Rangaswamy. Seconded by Dr. M. S. Jayaraman.

9. This Conference views with concern the move to impart studies on Animal Husbandry in institutions other than Veterinary Colleges and is of firm opinion that Veterinary and Animal Husbandry studies should not be bifurcated on any account and the pattern of instruction now imparted in this country in both branches of science in the Colleges of Veterinary and Animal Husbandry should continue.

Moved by Dr. B. J. Banerjee. Seconded by Dr. A. Chatterjee.

10. Resolved that this Conference appeals to the Members of the profession to liberally contribute to the Reserve Fund of the Indian Veterinary Journal so that the Journal may be placed on a strong and stable basis to serve the cause of the profession and the country.

Moved by Dr. K. S. Shetty. Seconded by Dr. C. G. Bhaskar.

11. Resolved that this Conference welcomes and ratifies the action of the Council of the All-India Veterinary Association in converting the Indian Veterinary Journal from a bi-monthly into a Monthly from January 1958.

Moved by Dr. V. S. Alwar. Seconded by Dr. C. R. Krishnamurthy.

12. Resolved that this Conference places on record its appreciation of the long and meritorious services rendered to the Indian Veterinary profession in general and to the Indian Veterinary Journal in particular by Dr. Pangal Srinivasa Rao as the Editor of the said journal for over thirty one years from its inception.

Moved by Dr. M. Mahalingam. Seconded by Dr. V. S. Alwar.

13. Resolved that this Conference requests the Directors of Animal Husbandry and Veterinary Services in all the States of the Union to supply a copy of the Indian Veterinary Journal to each of the Veterinary billets in their respective States with

a view to keep the members of the staff posted with up-to-date improvements and progress going on in the Veterinary field of science.

Moved by Dr. V. N. Sharma. Seconded by Dr. C. G. Bhaskar.

14. Resolved that this Conference places its deep sense of gratitude to the present Ministry in the Bombay State for having retransferred the Livestock work to the Animal Husbandry Department as in other States.

Moved by Dr. V. G. Khare. Seconded by Dr. C. R. Krishnamurthy.

An unforgettable Scene

When the resolution No. 10 appealing for liberal contribution to the I.V.J. Reserve Fund was moved by Dr. K. S. Shetty, G.M.V.C., Ph.D., and seconded by Dr. C. G. Bhaskar B.V.Sc., M.R.C.V.S., the assembly gave an insight into the real worth of the profession. Member after member began rushing to the dais to pay his humble contribution on the spot or to announce his proposed contribution on the microphone. It was a job for the General Secretary and his devoted workers to take down the names or collect the contributions. They were coming so thick and fast and with such zeal and loyalty, that the Old Timers on the dais were moved to tears at this exuberant exhibition of deep love of the profession for a great cause. "It was a highly stimulating experience" as was expressed by the General Secretary. The ball was set rolling when Rao Bahadur V. R. Phadke, the Retired Director of Veterinary Services, Bombay State, stumbled along and got over the platform to announce his second instalment of Rs. 50/-. That was the signal for action. The President of the Conference, Dr. Lakshmi Sahai announced Rs. 100/- as his contribution. No further words were needed. An amount of nearly Rs. 2500/- was either announced or paid on the spot. It was an unforgettable scene. Here again Mysore has set an example. We commend such collections at all State Veterinary Conferences under organised control. The names of all those who have paid, appear under the I.V.J. Reserve Fund list. The list of those who have announced is appended herewith (Appendix VI).

Later, Dr. L. Sahai made room for the venerable President of the Association Dr. M. S. Sastry to conduct the business meeting of the Association.

Rising amidst a round of applause and loud greetings, the G.O.M. of the profession, said the following in way of his preliminary remarks.

Dr. M. S. Sastry's Presidential remarks before opening the business session of the Conference on 7-11-1958.

Ladies and Gentlemen,

As President of the All-India Veterinary Association, it is my privilege to welcome you all to this 13th Session of our Conference. It gladdens my heart to see so many of you from other States, inspite of

the difficulties of travel and heavy expenditure involved. It is for these reasons mainly we hesitate to hold such Conferences every year. Our's is a vast country—in fact, it is a sub-continent and our's is comparatively a poor profession and it would be hard on our members to meet every year. Even so, the lure of our Association is such that it never fails to attract good attendance, wherever a Conference is held. I only hope Mysore would have made your stay here quite comfortable and that you would return home with happy memories of this Conference.

The history of the All-India Veterinary Association would read like a page from some book on fairy tales. It was born brought up and continues to exist as if by magic. And yet the loyalty and love it commands is something superb. It is that loyalty and love of the profession that has been the sustaining force to the few workers through all these years of hard work. And now the time has come for younger generation of men to shoulder this responsibility. I wish to make it clear that this burden of office sits heavily on me and I would very much like to make room for others. Equally hard has the General Secretary and the Editor been worked. He has been requesting me to relieve him of his offices. At my bidding at a moment's notice, he left Bangalore and shouldered the heavy responsibility of serving both as the General Secretary and the Editor of the *Indian Veterinary Journal* at Madras at great personal and domestic inconveniences. Such was the loyalty and discipline shown by him and I am thankful to him. After three years of hard work, he feels he is breaking down in health and wants to be relieved. This Conference should think of ways and means of relieving both of us. The General Secretary will soon be presenting before you the reports of the Association and of the *Indian Veterinary Journal* and it is my sincere conviction that it is going to be a severe loss to the profession if he retires from both these posts. Anyhow something has to be done.

The Joint-Secretary and the Treasurer, Sri H. R. Rangaswamy has been rendering valuable services being at head-quarters of the President. He has practically been my eyes and hand for reading and writing all my correspondence. I thank him most heartily.

Now Ladies and Gentlemen, I now call upon the General Secretary to present before this august body his reports, which have been passed by the Managing Council after due scrutiny.

I wish you all a happy Deepavali though away from home and also a very happy and prosperous New Year which is just round the corner!

Next the following two reports were read by Dr. T. Vinayaka Mudaliar in his capacity as General Secretary of the Association and as

Editor of the *Indian Veterinary Journal*. Both the reports were duly moved and seconded by Dr. V. S. Alwar and Dr. S. V. Mudaliar respectively and adopted unanimously by the assembly.

THE ALL-INDIA VETERINARY ASSOCIATION

Report for the years 1955, 1956 and 1957

Mr. President, Ladies and Gentlemen,

The report I am placing before you relates to the three calendar years 1955, 1956 and 1957. During the period under reference the Association as usual was keeping in contact with all State Governments and the Central Government, on all matters of importance to the profession, as and when they arose. This work of the Association though not spectacular enough to attract attention, it should be understood, is of very vital nature to the profession. It is able to speak on behalf of the profession and express its opinion boldly on all matters of importance. Its voice is heard with respect, as is evident from the courteous replies received. One need not be unnecessarily impatient with regard to the success or otherwise of the several requests made. It is within the experience of this Association that matters get straightened as we keep on pressing our claims year after year. The wheels of the Government move slowly and we must have the necessary patience to wait for the destined hour.

Since we last met in Madras in January 1955, Veterinary Education in India has received much impetus. More Veterinary Colleges have been opened in Bikaner, Mhow, Cuttack, Bapatla, Trichur, Bangalore and Nagpur. The institution of post-graduate course of studies in four of the Veterinary Colleges in India is another land mark. This Association has been urging for such progressive steps from its very inception. We are thankful to the authorities concerned for all that is being done in the field of Veterinary Education.

The Interim Indian Veterinary Council is fast getting into its strides. It has held so far three meetings and has framed rules and regulations for its working as well as a model bill for Registration of Veterinary Practitioners. States like Bombay, Uttar Pradesh and Madras have already their own acts. The other States are busy getting their bills passed. We have requested all those States, through the *Indian Veterinary Journal* to hasten with such work, so that the Central Government may take up the question of placing this Council on a statutory basis. In the meanwhile we appeal to the President of the Interim Indian Veterinary Council to insist upon all States filling up the vacancies in the Interim Indian Veterinary Council. This is very necessary to place the Council on a sound democratic basis.

At our last Conference one of our major requests was for re-transfer of livestock work to Animal Husbandry Department in Bombay State. This has been given effect to and it is but fitting that we should place on record our deep sense of gratitude to the present Ministry at Bombay. We appeal to such other States who have not yet brought about this progressive step, to fall in line with other States so as to enable the country to advance more rapidly in the matter of food production.

One other resolution of more than ordinary interest which we adopted at our last Conference was the representation asked for Veterinarians on State Legislative Councils and on the Rajya Sabha. Most of the States and the Centre have replied that the matter is receiving their consideration. This resolution was strongly supported with a powerful editorial in the *Indian Veterinary Journal* and it is hoped that the Governments would see the highly reasonable nature of our request and give the representation asked for before long. It is, however, felt that our Officers at the helm of affairs both at the Centre and in the several States, can use their influence and bring about this representation, which will not only raise the status of the profession but will help national interest in the matter of development of Animal Husbandry matters on right lines in our country.

All other resolutions passed at our last conference were duly communicated to the Governments concerned and they have acknowledged their receipt.

The several State Associations have of late shown some signs of revival. Necessary advice and guidance have been given whenever asked for. Some States seem to insist upon having separate Associations for different classes of officers. This is an old relic of foreign domination, which aimed at keeping the Indians divided in all fields of human endeavour. There is no point in creating castes within the profession and impeding the progress of science. There must be a single powerful professional body of Veterinarians of all denominations in every State, officials and non-officials for exchange of notes at Conferences and meetings and discussion of purely scientific subjects. With such a body of experts Government should expect sound Judgment and high sense of responsibility and there should be nothing objectionable if they indicate on broad lines what should be the policy and programme of development of Animal Husbandry work in each State, without infringing on departmental rules and regulations. No individual cause could be challenged by such associations. Service questions could be left to Service Associations, if the rules so insist. In any case, it is emphasised that no professional man should have any objection to have one central body in every State, to work for the advancement of

science. This Association appeals to every one concerned to help in the formation of such an association.

The National Institute of Science in India has been pleased to increase its publication grant for the *Indian Veterinary Journal* from Rs. 250/- to Rs. 500/-. We only hope they will soon be convinced that we deserve more.

The following Associations paid their affiliation fees during the period under report :—

		Rs. nP.
22—1-55	West Bengal ...	20-00
10-10-55	Bombay Veterinary Medical Association 1952, 1953 and 1954 ...	121-00
2-12-55	Madras Veterinary Association 1954 and 1955 ...	25-50
24-4-56	U.P. Veterinary Association 1953-54 and 1954-55 ...	57-00
21-6-56	M.P. Veterinary Association 1956 ...	60-00
12-9-58	U.P. Veterinary Association, 55-56, 56-57 and 57-58 ...	109-00
16-10-58	M.P. Veterinary Association 56 and 57 ...	47-60
Total for the 3 Years ...		440-10

This amount is merged with the account of the *Indian Veterinary Journal*, as was resolved at the last meeting of the General Body.

We are thankful to the Railway Board for the Railway concession granted to the delegates attending this Conference.

It is requested that early in 1959 a complete list of members of each State Association as it stands on 31-12-1958 may please be furnished to the General Secretary of the All India Veterinary Association and all arrears of affiliation fees till that date be paid.

The Office of the General Secretary stands to-day combined with that of the Editor, *Indian Veterinary Journal*. The work involved is too much for a single individual and it would be in the interest of both items of work if this Conference decides to separate these two offices and elect a new General Secretary in his place or a new Editor. It would be better still if new men are found for both the offices, as the present incumbent is definitely breaking down under the strain of such work due to his advancing age.

The report of the *Indian Veterinary Journal* is presented separately and all other matters of routine nature are not touched upon as they are best left to the Managing Council of the Association.

I have nothing more to add except thanking you all for putting up with all shortcomings on my part in the management of this great Association.

T. VINAYAKA MUDALIAR,
General Secretary.

THE INDIAN VETERINARY JOURNAL Report for the years 1955, 1956 and 1957

Mr. President, Ladies and Gentlemen,

The period under report, may be considered an epoch-making one in the life of the *Indian Veterinary Journal*. First and foremost, there was the change in the Editorship of the Journal. It was in September 1955 that Dr. Pangal Srinivasa Rao retired from the Editorship of this Journal, after a meritorious service of 31 years in the cause of the profession. I can hardly claim to be a suitable substitute but my only consolation is that I am doing my best.

Secondly, the official year of the Journal, which was from July to June, was changed over to the calendar year.

Thirdly this magazine was converted into a monthly from 1st January 1958. The decision to do so was taken by the Managing Council of the Association during the period under reference. This is a momentous decision which has brought this journal in line with other progressive journals of the world after nearly 34 years of its existence.

There was no doubt an element of risk in conversion of the Journal into a monthly but the very fact that it has survived the first year of the ordeal, heartens us to believe that its future may not be beset with greater difficulties. This conversion coincided unfortunately with high cost of paper, nay, even scarcity of paper, high cost of printing, high cost of Block Making etc., but so far I have been able to steer clear of all dangers and risks involved. It remains to be seen what the future has in store for us.

In appreciation of the good work done by this Journal the National Institute of Sciences of India has been pleased to raise its grant from Rs. 250 to Rs. 500 per annum. I feel certain that with the present conversion of our Journal into a monthly, more is to come from that enlightened body. The total number of copies circulated at present is 2,500 which shows a net rise of nearly 600 copies during the period under report. More could be achieved with the co-operation of one and all of you.

At our last Conference, we made an appeal to all State Governments to start subscribing for the *Indian Veterinary Journal* for supply to all the Billets under their charge. Bombay, Uttar Pradesh, Bihar, Orissa and Madras have all acceded to our request. But Mysore, Andhra Pradesh, Kerala, Madhya Pradesh and few other States are still to patronise us. We appeal to them once again to extend their help and support this only national journal in our walk of life. Bengal, which began well in subscribing for nearly 124 copies, has somehow fallen in heavy arrears and in spite of repeated requests, reminders and personal contact by me at the time of my last visit to Calcutta, still continues to be a heavy defaulter. I would request the new Managing Council to go through the connected papers and advise the Editor as to what should be the next move. This question of arrears impedes all progress of this journal. I would request you all to note that subscriptions are strictly payable in advance and it will be a great help if every one observes this simple rule in actual practice.

With a view to place the Journal on a sounder basis and bring about several improvements in its publication, an appeal for a Reserve Fund was issued by the President of the Association. It has been repeated in every issue of the journal by the Editor also; but the response so far has been very disappointing. Ladies and Gentlemen, I appeal to you to bestow some thought over this question. You are what you are to-day because of your profession and the profession is what it is to-day because of the *Indian Veterinary Journal*. That it is not a tall claim will be evident to any impartial critic by going through its pages from its very inception. This edifice of ours has been built on the sweat of voluntary workers, most of whom have now begun to sink under the weight of their age. It is their ambition to complete the work they have taken on behalf of the profession and place this journal on a sounder basis before they disappear into the void. What they ask of you is mere financial assistance. Should you not put back into the profession a fraction, a minute fraction at least, of what you have taken out of it, so that you may pass on this legacy better than you found it? It is a mere relay race. You pass on what you have received and unless you show this much of co-operative spirit the race is bound to be lost. This poor response for the reserve fund has broken the heart of many of its devoted workers. It is estimated roughly that there are 4,000 Veterinary Surgeons in this land. Even if every one of them pays Rs. 10/- each, we should easily be able to put up a building and even own a press. But I cannot forget the admirable responses made by a few so far and I tender my heartfelt thanks to one and all of them. A notable subscriber is Mr. W. F. Guard, the T.C.M. Expert Adviser now working at Bikaner. He happened to pick up a copy of our journal and go through it. He

immediately wrote me a very nice letter and followed it up with his own contribution. Here is an example of professional brotherhood. Sisters and Brothers of my profession who are present here to-day and those whom this feeble voice of mine might reach in due course of time I appeal to you all not to delay a day longer but to honour this appeal made on behalf of the profession.

Ladies and Gentlemen, pardon me, for sounding a personal note. I have been connected with the *Indian Veterinary Journal* from its very inception i.e., for nearly 35 years. I am tired. I feel the infirmities of age creeping on me. I have been asking the President to relieve me, but he has not so far been pleased to move in this matter. I make this direct appeal to you. I have done my bit. Let others come forward and shoulder this great responsibility. I submit that this is a matter which requires your serious consideration.

The audited statements of receipt and expenditure for the period under reference are appended to this report.

I request that both these reports may please be adopted by this august body.

THE PRICE OF RE-PRINTS OF I. V. JOURNAL IS AS UNDER

No. of pages	No. OF REPRINTS.				
	25	50	100	200	300
1	Rs. 2-8-0	Rs. 3-0-0	Rs. 4-0-0	Rs. 5-0-0	Rs. 6-0-0
2	„ 3-8-0	„ 4-0-0	„ 5-0-0	„ 6-0-0	„ 7-0-0
3	„ 4-8-0	„ 5-8-0	„ 7-0-0	„ 9-0-0	„ 11-0-0
4-5	„ 6-8-0	„ 8-8-0	„ 11-8-0	„ 17-8-0	„ 23-8-0
6-7	„ 8-8-0	„ 10-8-0	„ 13-8-0	„ 19-8-0	„ 25-8-0
8-9	„ 10-8-0	„ 12-8-0	„ 15-8-0	„ 21-8-0	„ 27-8-0
10-11	„ 12-8-0	„ 14-8-0	„ 17-8-0	„ 23-8-0	„ 29-8-0
12-13	„ 14-8-0	„ 16-8-0	„ 19-8-0	„ 25-8-0	„ 31-8-0
14-16	„ 17-8-0	„ 19-8-0	„ 22-8-0	„ 28-8-0	„ 34-8-0

Postage is additional. Extra charge is made for reprints containing photo-prints on art paper. Normally re-prints are prepared *without covers* unless specifically ordered, in which case the actual cost of covers and their printing will be recovered.

THE INDIAN VETERINARY JOURNAL, MADRAS Receipts and Payments account for the year ended 30th June 1955. (31st Volume)

RECEIPTS		PAYMENTS	
	Rs. A. P.		Rs. A. P.
To opening balance on 1-7-1954	2,022 4 9	By Printing charges	10,011 1 6
„ Subscriptions received in the year	14,347 1 6	„ Postage	3,035 8 0
„ Advertisements	8,612 0 0	„ Reprints etc.	290 0 0
„ Reprints etc.	480 7 0	„ Rent	480 0 0
„ Grant-in-aid from Indian Science Congress	250 0 0	„ Salary with insurance	1,539 4 0
„ Affiliation Fees	20 0 0	„ Honoraria to Editors	1,500 0 0
„ Miscellaneous Receipts	119 15 0	„ Reference book	12 15 3
		„ Newspapers	36 0 0
		„ Subscription to Indian Science Congress	12 4 0
		„ Conference expenses (Travelling)	122 14 0
		„ Audit Fee	50 0 0
		„ Miscellaneous expenses	12 9 0
		„ Balance on 30th June 1955	3,716 4 6
	Rs. 20,851 12 3		Rs. 20,851 12 3

Examined and Found Correct.

(Sd.) P. GOPALAKRISHNA RAO,
Chartered Accountant.

THE INDIAN VETERINARY JOURNAL, MADRAS
Statement of Receipts and Payments for the year ended 30th June 1956.
(32nd Volume)

RECEIPTS	PAYMENTS
To Balance on 1-7-55 " Subscriptions " Advertisements " Grants-in-aid : Government of Madras National Institute of Science Reprints and Back volumes Affiliation Fees Life membership Fees Excess from Dr. Pangal's Farewell Party Sale of old newspapers Bank interest Loan to Manager partly recovered Suspense-Excess paid by Dr. Pangal	By Printing charges " Postages " Rent " Salary with insurance " Honorarium to Editor " Subscriptions to Newspapers " Subscription to Indian Science Congress " Bank charges " Commission on advertisements " Audit Fees " Repairs to typewriter " Office shifting expenses " Cycle purchase " Furniture purchase " Loan to Manager " Rent deposit " Balance: With Bank On hand including stamps
Rs. A. P. 3,716 4 6 15,829 15 10 2,408 15 0 500 0 0 250 0 0 565 5 0 268 8 0 120 0 0 87 15 0 48 7 0 8 0 0 100 0 0 280 2 0 Rs. 24,178 8 4	Rs. A. P. 9,346 0 9 3,057 11 3 1,224 11 0 1,754 8 0 1,000 0 0 74 2 0 12 4 0 84 8 0 30 0 0 50 0 0 28 8 0 117 8 0 98 7 8 115 2 6 250 0 0 125 0 0 5,967 10 0 92 7 0 Rs. 24,178 8 4

Examined and Found Correct.

(Sd.) P. GOPALAKRISHNA RAO,
Chartered Accountant.
5-10-1956.

THE INDIAN VETERINARY JOURNAL, MADRAS
Statement of Receipts and Payments from 1-7-1956 to 31-12-1956.
(33rd Volume)

RECEIPTS	PAYMENTS
To Balance on 1-7-56 " Subscriptions " Advertisements " Reprints and back volumes " Sale of old papers " Block charges realised " Bank interest " Loan to Manager recovered partly " Cycle repairs loan recovered	By Printing charges " Postages " Printing and Stationery " Rent " Salary " Honorarium to Editor " Bank charges " Audit Fees " Repairs to Typewriter " Conveyance " Books and Periodicals " Cycle repairs " Miscellaneous " Suspense-Excess received from Dr. Pangal " Cycle repairs loan " Balance on 31-12-1956 : With Bank On hand Petty Cash Postage account
Rs. A. P. 6,960 1 7 5,330 3 9 1,595 15 0 389 8 0 10 7 6 656 11 0 12 18 0 50 0 0 20 0 0 Rs. 14,225 11 10	Rs. A. P. 5,975 10 9 1,426 1 9 97 15 6 754 2 0 869 1 6 750 0 0 18 6 0 50 0 0 10 0 0 28 8 0 42 1 0 29 14 6 10 8 8 280 2 0 20 0 0 8,859 10 10 23 13 6 23 15 6 15 13 9 3,923 4 7 Rs. 14,225 11 10

10, Thambu Chetty St.,
Madras-1,
4th July, 1957.

Examined and Found Correct.

(Sd.) P. GOPALAKRISHNA RAO,
Chartered Accountant.

THE INDIAN VETERINARY JOURNAL, MADRAS
Statement of Receipts and Payments for the year ended 31st December 1957.
(34th Volume)

RECEIPTS		PAYMENTS	
To Balances on 1-1-1957: 23-78 On hand 23-97 Petty cash 15-86 Postage Account 3859-68 With Bank		Rs. n.P. 9,604-55 2,817-49 150-01 1,500-00 1,947-68 1,500-00	
" Subscriptions (nett) " Advertisements " Reprints and Back Volumes (nett) " Sale of old papers " Block charges recovered " Bank Interest " Grant for Publication from National Institute of Sciences " Advance as per contra recovered		By Printing charges including cost of paper " Postages " Office Printing and Stationery " Rent " Salaries including Bonus " Honorarium to Editor " Bank Charges " Telephone charges " Repairs to typewriter " Conveyance " Books and Periodicals " Subscription to Indian Science Congress " Repairs to Cycle " Advertisement Commission " Sundries " Furniture " Fan " Advance Rent and Deposit for Telephone " Advance " Undisbursed Salary with Editor (since paid) " Balances on 31-12-1957: On hand 23-78 Petty cash 8-55 Postage 24-32 Bank 4,804-03	
Rs. n.P. 3,923-29 15,369-43 2,734-03 417-79 22-05 52-00 20-82 500-00 250-00		Rs. n.P. 9,604-55 2,817-49 150-01 1,500-00 1,947-68 1,500-00 55-55 69-56 13-39 33-90 86-10 12-30 33-77 36-00 27-47 39-61 119-34 100-00 250-00 28-06	
Rs. 23,389-40		Rs. 23,389-40	

(Sd.) P. GOPALAKRISHNA RAO,
Chartered Accountant.

Examined and Found Correct.

10, Thamby Chetty Street,
 Madras-1,
 18th April, 1958.

Next came the election of office-bearers. Dr. V. S. Alwar proposed and Dr. M. S. Jayaraman seconded the following list of office-bearers and the assembly unanimously approved.

<i>President</i>	... Dr. M. S. Sastry
<i>Vice-President</i>	... Rao Bahadur V. R. Phadke
<i>General Secretary</i>	... Dr. V. S. Kuppuswamy Mudaliar
<i>Editor</i>	... Rao Sahib T. Vinayaka Mudaliar.
<i>Joint Secretary and Treasurer</i>	} Dr. H. R. Rangaswamy
<i>Representatives</i>	... Dr. S. V. Mudaliar
	... " K. S. Krishnappa
	... " G. Osman Khan.

Dr. M. S. Sastry in his concluding remarks said " there is a society for prevention of cruelty to animals, but there seems to be none to prevent cruelty to men. I feel it is cruel to ask men of my age to continue in office. Well, I obey the mandate of the profession." (Loud cheers).

The President of the Conference was next requested to bring to a close this highly successful session. The whole assembly gave him a good hand, when Dr. L. Sahai got up to deliver his concluding remarks.

Ladies and Gentlemen,

It has not been my good fortune to attend many of the sessions of the All-India Veterinary Association. I am very much impressed with the way the proceedings have been conducted. The professional papers read were really good and I only wish there had been more number of papers for discussion. This should be the main item of such Conferences. On the whole this session at Bangalore has been highly successful and I am deeply thankful to Dr. K. S. Shetty and his Reception Committee and the All-India Veterinary Association for giving me this opportunity to preside over this Conference. It was a very useful experience and I thank you all for the co-operation you have extended to me in conducting the proceedings of this great gathering. (Loud applause).

The final item of the Conference, 'Vote of thanks' keyed up the audience to 'great expectations' as they wished their hearts to be poured out in thankfulness to all those who made their stay at Bangalore so very interesting and instructive. It was indeed a hard job for the General Secretary, who running a temperature because of a slight touch of 'Flu' was still at his post to perform this last duty.

Vote of thanks by Rao Sahib T. Vinayaka Mudaliar, G.M.V.C.

Mr. President, Ladies and Gentlemen,

The time has come for us to part. So it is with a sad heart I rise to say a few words of farewell. Partings of any nature are sad indeed in this world, more so after meeting such a galaxy of professional sisters and brothers from far and near. That this Conference has been an unqualified success no one can dispute. It was all Mysore-like and it had the stamp of Mysore on every detail. It is hard to compete with Mysore in the matter of arranging such Inter-State, nay even international gatherings, and playing the ideal host. I had the good fortune to attend and take part in the previous Conference here about 27 years ago. Times have changed but the standard of Mysore has not changed. It is usual to talk of good old days and bemoan the loss of standards at the present time; but Mysore seems to thrive like an ever-green without any loss in standards and is always fresh and fragrant, even as Nature is in this part of our country. I was musing for some time as to what could be the secret for such an unfailing success. Could it be the hidden hand of the presiding deity of the State, the Great Chamundeswari or some factor in the atmosphere of Mysore that crowns her with such success? Let us not be sentimental in facing facts. It is the superb human endeavour that is behind all such success. From the members of the Cabinet to the last man in the administration is jealous of the fair name of Mysore and will do every thing possible not to let down the name of Mysore. Let us take our own case. His Highness the Governor, the head of the State and the first citizen of Mysore was graciously pleased to come and inaugurate this combined session and grace the occasion with his august presence. This has pleased the entire Animal Husbandry workers in this country and it is my first and foremost duty to tender the heartfelt thanks of the entire profession to His Highness, the Governor of Mysore. Next, the State Government came out with a generous grant of Rs. 4,000/- for the Silver Jubilee celebrations held in conjunction with an All-India Conference of this nature. They went further and have treated all the Delegates from Mysore State as on duty and have given them travelling allowances! No other State in India has so far done this. Ladies and Gentlemen, you would like me to tender our thanks to the Government of Mysore for such progressive ideas and the fine leadership shown. I thank them most profoundly. Again the Chief Minister has made it convenient to attend and take part in our celebrations, in the midst of heavy Legislative session. All honour to him!

Next I come to the individual workers. The Director of Animal Husbandry, Dr. K. S. Shetty with his back-ground of experience in

old Hyderabad State has caught the infection of Mysore admirably well and has been sparing no pains to make this session a great success. It depends such a lot on the Directors of States to make or mar the success of such gatherings under existing conditions in our country. It has always been the policy of the All-India Veterinary Association to enlist the sympathy and co-operation of the Directors of States. Such sympathy and co-operation came in an unstinted measure from Dr. K. S. Shetty. He has upheld the high traditions of Mysore and I thank him on behalf of the A. I. V. A.

Next comes the fine team of Officers, young and old, who virtually worked round the clock to make this Conference such a success. Where so many have given their best it would be invidious to mention names but even so I cannot but mention the names of Dr. Nanjiah, and Dr. Vasudeva Mudaliar who bore the brunt of burden of this work and who planned and executed all items of work with a thoroughness and sense of responsibility which were really praiseworthy. Then there are Drs. Hardikar, Muniappa, Sreekantiah, Kalappa, Krishnappa and others who thought, spoke and acted on approved Mysore lines! Similarly you would have noticed how well the newly opened Veterinary College boys behaved as volunteers. They are a fine lot. The discipline and hard work shown by them augurs well for the future of that College. I thank them all. Thus, it would be seen, it is the combined team work, it is the superb human endeavour that is at the bottom of such success. Added to that, their fine aesthetic sense born of environmental factors, which Nature has provided in such plenty that makes for the success of Mysore. All honour to Mysore! Every Indian should be proud of Mysore and I am sure this great gathering is highly grateful for the opportunity given them to meet in this charming City.

Ladies and Gentlemen, the President of our Conference is too well known to you all to need any mention from me. As head of the Veterinary Profession in India, we love him and adore him. The way he has conducted the proceedings and given the lead in many matters have clearly proved what a worthy choice we have made. The honour of being the President of an A.I.V.C., is not lightly bestowed by the profession. For it is the greatest gift in the hands of the profession and Dr. Sahai has earned it in a large measure through his lovable personal character, charming manners and devoted service to the profession. It is really very good of him to have acceded to our request to preside over this Conference and I thank him most profoundly on behalf of the A.I.V.A., and on behalf of you all in particular.

Next I come to the Delegates who have honoured our invitation and have come all the way from long distances, not minding the

travails of travel in these hard days. I particularly refer to our Bengal, Kashmere, Bombay, Kerala, Andhra Pradesh and Madras delegates. They had shown the right spirit as members of a noble profession. This lesson of their visit to far off Mysore should not be lost on the Veterinary Surgeons of the south, when their invitations come to them at a future date. They have been such a fine lot, un-complaining, ever cheerful, making themselves quite merry and adding lustre to the entire conference. We are thankful to the ladies in particular who braved all the difficulties of the journey and were quite pleased to put up with all inconveniences in a place far away from their home surroundings. We have done what we could for the creature comforts of all our Delegates and I appeal to them to excuse us for all shortcomings and carry only pleasant memories of this Conference. To the Mysore delegates, I say, you have played the host exceedingly well and earned the goodwill of every one who had gathered here. To the owners of the Kalyana Mantaps Sajjan Rao's and Kota Lakshmiah's where our Delegates were put up and boarding arrangements were made, no words are adequate to express our gratitude. Kota's in particular gave us all facilities and co-operated with us in an admirable manner. The owner came round and explained to us every detail of his planning and expressed his supreme satisfaction that it should have been useful to such a gathering of Doctors of our sacred Gô-matha.

The Publicity Department of Mysore State and the Press deserve our thanks for the uniform courtesy and consideration shown by them. The authorities of this charming, Botanical Gardens, known as Lalbagh and of that stately structure, Sir Puttanna Chetty Town Hall, deserve our thanks in no small measure for all the help rendered. We thank all those Ladies and Gentlemen, who have responded to our invitation and honoured us with their presence.

Ladies and Gentlemen, I say farewell. May God be with you! (Loud applause).

Dr. V. G. Khare from Aarey Milk Colony, Bombay thanked the Reception Committee on behalf of Bombay in particular and also on behalf of Delegates from other States, for all the excellent arrangements made and for the very enjoyable time they had at Bangalore.

The great gathering was next entertained to Snake Dance by Kumari Vijaya and a film show a little later.

The Second day's function was rounded off with a Dinner by the State Veterinary Medical Association when the usual toasts were proposed and responded.

Third day (8-11-'58) The Mysore Serum Institute

This day was set apart for local visits to Hindustan Air Craft Factory, Telephone Industry, Bharat Electronics, Indian Institute of Science, Sir C. V. Raman's Institute, The Indian Dairy Research Institute, etc. The Delegates were finally brought to the Mysore Serum Institute where they had a 'buffet-lunch'. The different sections of the Institute were shown round to the Delegates and they all appreciated very much the good work done by this twenty-five year old Institute.

AT HOME

On the stroke of five in the evening, the Delegates began arriving at the spacious lawn of the Government Guest House (the old Residency). The Government of Mysore were At Home to the Delegates of the All-India Veterinary Conference. It was on a lavish scale and worthy of the enlightened State of Mysore. Ministers, Secretaries of Government, Ex-Ministers, some M.L.A's and M.L.C's were also present. It was an enjoyable evening and this fine gesture of the Government was very much appreciated by the Delegates. It was almost dark when the Delegates began to disperse after taking leave of the Government dignitaries.

Fourth Day (9-11-'58) Excursion Day

Delegates broke into convenient groups and buses were arranged to take them to Serirangapatam, Mysore, Brindavan, etc.

Thus ended a glorious session, which will linger long in the memory of all those who attended it.

LONG LIVE MYSORE!

LONG LIVE THE ALL-INDIA VETERINARY ASSOCIATION!

The following is the text of the speech of Dr. W. F. Guard, D.V.M., at the Thirteenth All-India Veterinary Conference. He has been kind enough to reconstruct his extempore speech from memory and send us a copy, as requested by us. (Ed. I.V.J.)

Commissioner Dr. Sahai, Chairman, Distinguished Guests and fellow Veterinarians,

I bring you greetings and best wishes from America and from the Faculty of the Rajasthan College of Veterinary Science and Animal Husbandry, Bikaner. I wish to thank your General Secretary and Journal Editor, the Reception Committees of both the All-India Veterinary Association and of the Silver Jubilee Celebration of the Mysore Serum Institute, His Highness the Governor of Mysore and the Director

of Animal Husbandry, Dr. K. S. Shetty, for the most gracious invitations for both Mrs. Guard and myself. I wish to compliment you upon the high quality of the scientific papers presented here this morning and also for the enthusiasm with which members of the unexpectedly large (300) audience participated in lively and constructive discussions. It is quite heartening to see that such meetings are possible in India. Since very few, if any, Veterinarians from States other than Southern India are here it is a challenge and indeed a necessity that great effort be expended to stimulate the formation of active Veterinary Associations in every State, for representation and zealous participation in the All-India Veterinary Association.

Perhaps it would be appropriate to give you a brief glimpse into my personal back-ground and make a few comparisons of conditions now and fifty years ago. I was born in 1890 on a relatively large livestock farm where I had rather extensive farming experiences and am still vitally interested in Agriculture. Inside plumbing and electric lights existed only in the large Cities. Hay, grain, cattle and hogs were very cheap; dairy cows 15 to 20 Dollars each and hogs 3 to 5 cents a pound, while a good team of horses would sell for 200 to 500 Dollars. Veterinary practice was largely confined to treating horses and mules. By the time I was 20 years of age, hog cholera virus had been discovered and an anti-sera developed. The quality and price of both cattle and hogs was on the rise and mechanised farming was being born. By the time I was 30 years of age the first World War was over and horses for farm power were on their way out, and Veterinary practice was principally with cattle, swine, and pet animals and poultry was receiving greater attention.

To-day there are over 19,000 Veterinarians in the U.S.A. Approximately 44% are engaged in a general type of practice which means they serve principally farmers. However by their vigilance in the early detection of infectious and contagious diseases of animals and in their participation in programmes of diagnosis and elimination of animal diseases communicable to man they serve as an important link in all federal, State and Municipal Public Health programmes also.

Then approximately 30% are engaged on a full time basis in what we recognise as "Veterinary Public Health" services. Briefly this includes the inspection of meats, dairy cattle and the sanitary processing of all foods of animal origin. They also have charge of most of the well organised Municipal Sanitary inspections under Boards of Health of all places serving meals or drinks to the public. Here it is worthy of note that the building of the Panama Canal was made possible by the discovery that "Texas Fever" of cattle was due to a blood parasite transmitted by an intermediary host, the tick. This was the first

evidence that a blood-sucking intermediary host was a factor in the transmission of certain types of disease. Since malarial fever of man had repeatedly caused cessation of work on the canal and since a study of the blood indicated a similarity of the two diseases the mosquito was immediately suspected and proven to be the vector. With the control of the mosquito the work was completed.

About 5% of our Veterinarians are engaged in teaching and/or research work. And the remaining 21% devote full time to small animal practice in the larger cities.

It is perhaps no coincidence that in both India and the U.S.A. the responsibility for the development of sound policies for the development of the livestock industry were entrusted to the guidance of a Veterinarian. The first Secretary of Agriculture in U.S.A. ("Tama" Jim Wilson) established a branch known as the Bureau of Animal Industry (B.A.I) and provided that the Chief of the Bureau should be a Veterinarian. The wisdom of this provision has been proven by the phenomenal success of the organisation which became a world-wide model for the development and protection of a sound Animal industry programme.

I wish to again emphasise the great importance of an organised Veterinary profession for the encouragement of the recording and reporting of individual and collective observations and findings for the maximum results in both Scientific progress and daily services. The American Veterinary Medical Association has been of inestimable value to Veterinary Science and has been very instrumental in helping to raise the standards of Veterinary Education. I note with considerable interest that the ALL-INDIA VETERINARY ASSOCIATION was organised in 1921 and that the publication of your first Journal was in 1924. It was about 1914 that the A.V.M.A., began publishing a journal, only 10 years before your journal.

Quite recently Dr. Rathore of Rajasthan Veterinary Department and the members of the Staff of the Rajasthan Veterinary College discussed plans for considerably more activity in regard to the formation of a real active State Association in Rajasthan and it is hoped that the Veterinarians of all States in India may fully realise the responsibility that is theirs in this connection.

Again I wish to thank you for this opportunity to meet with you and enjoy your programme and your wonderful hospitality.

APPENDIX I

Welcome Address

BY

DR. K. S. SHETTY, G.M.V.C., PH.D., (EDIN.),*Director of Animal Husbandry, Mysore State and Chairman,
Reception Committee.*

Your Highness, Hon'ble Chief Minister, President All-India Veterinary Conference, Distinguished visitors and Delegates,

On behalf of the members of Veterinary profession in Mysore State and the Committee for the Mysore Serum Institute Silver Jubilee Celebrations and on my own behalf I have great pleasure in extending to you all a hearty welcome to this joint session of the Mysore Serum Institute Silver Jubilee Celebrations and the Thirteenth All-India Veterinary Conference. We are indeed, fortunate in having amidst us this evening His Highness Shri Jayachamarajendra Wadiyar Bahadur, G.C.S.I., G.B.E., Governor of Mysore, to inaugurate this memorable session. We are also grateful to our Chief Minister Shri B. D. Jatti for having consented to preside over this function. We are happy that Shri Lakshmi Sahai, Animal Husbandry Commissioner with the Government of India is amidst us today to preside and guide us over the deliberations of the 13th All-India Veterinary Conference.

We the members of the Veterinary profession in this State are extremely happy that two important events in the history of the Veterinary profession of the State viz., the celebration of the Silver Jubilee of the Mysore Serum Institute and the Conference of the All-India Veterinary Association are being held conjointly affording us a rare opportunity to come into contact with leaders in the veterinary field of this country with whom we could exchange ideas in matters concerning the development of Animal Husbandry in our State.

The Mysore Serum Institute, the Silver Jubilee of which we are celebrating today has been playing its great role in the control of contagious diseases amongst livestock and the diseases communicable to human beings, in this State. This Institute is the first of its kind to be started in any of the States or Provinces and the second in the country being next to Mukteswar Institute. The Institute has enjoyed the reputation of having contributed to the maintenance of the health of livestock of not only Mysore State but also a number of other States notably

Bombay, Hyderabad, Travancore and Kashmir. We are proud that the products issued from this Institute have even gone beyond the shores of India to Malaya, Ceylon and Java. At a time when the ravages of cattle plague — Rinderpest — was so devastating and threatened the very existence of the cattle population in this State and when all the other States in India were still thinking on the *pros* and *cons* of undertaking the Serum-simultaneous method of inoculation to control the disease, the erstwhile Mysore State had actually started the campaign in a few selected villages under the direction of Major R. W. Simpson, the then Superintendent of Mysore Veterinary Department — a dynamic personality among veterinarians. Although the Department took this bold step, it had to face a great difficulty in procuring adequate quantities of Anti-Serum and Virus from the Imperial Veterinary Research Institute, Mukteswar situated on the foot hills of Himalayas at a distance of over 1,600 miles. The extreme fragility and short life of Rinderpest virus also did not permit its easy transit over a long distance. The production of the Rinderpest Virus in our State alone, became, therefore, imperative and a 'Virus Depot' for this purpose came into existence in the year 1926. This formed the nucleus of the *Mysore Serum Institute*. The experience gained with this Virus Depot paved the way for undertaking the production of several anti-sera against the important bacterial and viral diseases of livestock such as Rinderpest, Anthrax, Haemorrhagic Septicaemia, Black Quarter etc., from the year 1932.

Starting with the production of only two biological products viz., the Rinderpest Bull Virus and Anti-Rinderpest Serum, the Institute gradually expanded its activities year after year and today it is manufacturing as many as fifteen biologicals. Since its inception the Institute has issued over 300 lakhs unit doses of several sera and vaccines to the State Veterinary Department and over 82 lakhs unit doses to places outside the State with the result that it has been not only self supporting but is also realising a net income on an average of Rs. 75,000/— a year to Government.

The notable success, recorded in Mysore State in the execution of the pilot scheme for the eradication of Rinderpest undertaken recently, is in no small measure, due to the facilities available in this Institute for the storage of the freeze dried Vaccine and the conduct of laboratory tests connected with its viability and potency.

The scientific section of the Veterinary Department, which was started with the object of providing the necessary laboratory aid to field workers in the diagnosis of animal diseases and the investigation of obscure diseases encountered in the villages, became attached to the Mysore Serum Institute when it was shifted to its present premises.

This Section was later reorganised in the year 1935 into a Veterinary Research Section which has gradually developed into a full fledged research laboratory equipped with up-to-date apparatus, comprising of separate sections for Bacteriology, Pathology, Parasitology, Bio-Chemistry and Disease Investigations etc. A number of special research schemes on animal diseases have been and are being carried out in these laboratories with financial aid from the Indian Council of Agricultural Research. With its existing laboratory facilities, equipment and research staff specially trained in India and abroad, this Institute could easily serve as a Regional Centre for Veterinary Research in the South of India, even as it has enabled us to start the Mysore Veterinary College within its premises recently without waiting till the completion of permanent buildings.

A Souvenir to commemorate the Silver Jubilee of the Institute has been brought out which records the origin, growth and development of this Institute. I hope you will find it interesting. We have also raised a special fund called "The Mysore Serum Institute Silver Jubilee Fund" to enable us to erect a befitting memorial to mark this eventful day in the history of the Institute. The special committee appointed by Government have decided to utilise the amount collected for the construction of a building where the activities of the Mysore Veterinary Medical Association could be carried on. The total amount collected under the fund through public donations to date, comes to Rs. 54,000/- and with the selection of a suitable site and additional grant from Government we will soon have a permanent building for the State Veterinary Association.

Having given you a brief account of the growth of this Institute, it will not be out of place if I pass on to say a few words regarding the other activities of the Animal Husbandry Department.

Since we met here last, great changes have taken place in the organisational set up and activities of the Veterinary Department in Mysore State. The first major step was taken in 1945 when the Mysore Civil Veterinary Department was separated from the Department of Agriculture and constituted as an independent Department of Animal Husbandry and Veterinary Services, resulting in a remarkable intensification of work relating to the development of the livestock wealth of the State, so evident in recent years. The enlarged State of Mysore has under its control 372 Veterinary Dispensaries including Aid Centres and Itinerating Units which enable the department to carry Veterinary Aid to the very door of the ryot. The department has also under its control a number of livestock farms for the development of cattle, sheep and poultry. The Cattle Breeding Station at Ajjampur, together with the four Economic Cattle Farms and the Aided Cattle

Breeders' Scheme, is engaged with the important task of preserving the famous Amrithmahal breed of cattle.

At the Composite Livestock Farm & Research Station, Hessarghatta work is in progress for the improvement of the other famous Mysore breed *viz.*, Hallikar which possesses great potentialities for being developed into a dual purpose breed of cattle, besides breeding of improved types of sheep and poultry.

The Government Stud Farm at Kunigal is renowned for producing outstanding Race Horses which have made a name on the Indian Turf by winning many classics open to Indian breeds. With a view to utilise the vast grazing area available on this farm a flock of Bannur—well-known mutton type-breed of sheep, is also maintained to produce good stud rams for distribution to sheep breeders.

The starting of the Bangalore Milk Supply Scheme; the installation of a pasteurisation plant at Kudige Dairy Farm; establishment of a Buffalo Dairy at Kurikuppi in Bellary District, are among the various dairy development programmes recently undertaken by the department under the Second Five Year Plan. The Bangalore Milk Supply Scheme will soon have its dairy equipped with modern plants, in the buildings to be built at a cost of rupees 18 lakhs in the spacious grounds of Subhasnagar.

The chain of Sheep and Wool Extension Centres and Poultry Extension Centres that are being established in different parts of the State, mark important steps to develop sheep and poultry in the State.

The enumeration of these several development programmes of the department brings me to the important question of technically qualified personnel so essential for successful implementation of these schemes. The department is no doubt facing an acute shortage of Veterinary graduates at the moment, in common with other States in the country. But the want of a Veterinary College in our State hitherto had further aggravated the situation. Fortunately, now that the long overdue Mysore Veterinary College has started functioning admitting the first batch of 92 students to the first year B.V.Sc. course, this long standing serious handicap has been removed. The college which is expected to cost about rupees 44 lakhs will receive financial help from Government of India to the tune of 28 lakhs of rupees for buildings and equipment. The United States Technical Co-operation Mission in India have also offered their help in the shape of Library Books and Laboratory equipment to the value of rupees 1.75 lakhs.

Now coming to the subject of the All-India Veterinary Association which is holding its 13th Session, I may recall that this Association was

started in 1921 with the object of furthering the interests of the Veterinary profession in this country and helping the advancement of Veterinary science. It has succeeded remarkably well in achieving both these objectives. Barely within three years of its existence, the Association was able to start a journal under the title "The Indian Veterinary Journal" as its official organ. To the Veterinary profession in India, the Association has, thus, provided a common platform through its Conferences on the one side and a common press through its Journal on the other. With these two powerful aids to progress the Association has been contributing a good deal in giving correct lead to the profession and shaping the course of events in the development of Animal Husbandry work in this country. The reorganisation of Veterinary education and the affiliation of the Veterinary colleges to their respective Universities; the Institution of Post-graduate courses recently in four of the Veterinary Colleges in India; the transfer of livestock development work to the Veterinary Department; the formation of Interim Indian Veterinary Council to watch and regulate the code and conduct of Veterinary Surgeons and guard their interests, are some of the achievements of the Association of which we may well be proud.

It was about 28 years ago that this Association met in this City under the Presidentship of the then Animal Husbandry Commissioner, Sir Arthur Olver, and it is befitting to have its deliberations once again in this City, this time in conjunction with the Silver Jubilee Celebrations of the Mysore Serum Institute under the presidentship of the present Animal Husbandry Commissioner Shri Lakshmi Sahai. We are deeply thankful to the All India Veterinary Association for this fine gesture of good will.

I once again extend to you all a warm welcome and thank you for having so kindly responded to our invitation and honoured us with your presence here today. I hope the delegates who have come from different parts of the country will find their stay in this beautiful City of Bangalore a pleasant one.

I now request His Highness to inaugurate this memorable session and the Hon'ble Chief Minister to preside over the Silver Jubilee Celebrations and Shri Lakshmi Sahai to preside over the All-India Veterinary Conference.

APPENDIX II

Speech of His Highness Maharaja Sri Jaya Chamaraja Wadiyar Bahadur, G.C.B., G.C.S.I., Governor of Mysore, on the occasion of the Inauguration of the Silver Jubilee Celebrations of the Mysore Serum Institute and the All-India Veterinary Conference at Bangalore.

Thursday, 6th November 1958

Mr. Chief Minister, Shri Lakshmi Sahai, Ladies and Gentlemen,

I am very happy to participate in the Silver Jubilee Celebrations of the Mysore Serum Institute and the Thirteenth All-India Veterinary Conference.

One of the most remarkable things about the progress of science is the speed with which developments take place in a particular field in a short space of time after long years of what appeared to be quiescence if not stagnation. Looking at the present position in our country of Veterinary Science and of biological research in relation to it, it would be difficult to imagine that most of this has been the achievement of no more than about a quarter of a century.

The All-India Veterinary Association and the Mysore project for the manufacture of serum are of about the same age. The Mysore Serum Institute is a pioneer institution in the country. Its history is a story of steady and rapid growth in a comparatively short period of time. The difficulty of obtaining necessary sera and vaccines from the distant and solitary Institute at Mukteswar in the extreme north demanded and suggested its own remedy. The opening of a "Virus Depot" in 1925 was followed seven years later by the establishment of the Serum Institute at Bangalore. This was the beginning of the progressive fight against Rinderpest and other epidemics which were taking heavy toll of the livestock of the country. Within a very few years a Research Section was inaugurated and this was followed by the production of a wider range of sera and vaccines for combating many of the diseases which animal flesh was heir to and which in addition threatened man also. It is a matter of pride that very soon not only were the requirements of this State met in full, but it was also possible to supply serum to other places in and outside the country and that the Institute was shortly able to work at a handsome profit.

Steady progress and expansion have characterised these years, Laboratories have been established and have expanded, research scholars

have acquired special training abroad, and various schemes of serum production and disease control have been undertaken with the generous encouragement of the Central Government and the active aid of the Indian Council of Agricultural Research. The recent establishment of the Mysore Veterinary College for the training of competent graduates has supplied a valuable complement to the Research Institute. With these two institutions working together with enthusiasm and well-planned effort we may look forward to even greater progress in the promotion of livestock welfare and the eradication of livestock ailments.

It is a matter of pleasure to all of us that the Thirteenth All-India Veterinary Conference is being held here at the same time as the Silver Jubilee Celebrations of the Mysore Serum Institute. The All-India Veterinary Association which was formed in 1921, and its Journal which was started three years later, have done remarkable service for the progress of veterinary science and practice in the country.

From times immemorial, cattle—both milch cattle and draught cattle—have held an important place in the economy of this country. They constituted the measure of wealth in ancient times, and even today the prosperity of our agriculture is bound up with their health and welfare. The improvement of their breeds, the control of the diseases to which they are susceptible and full appreciation of their value are subjects which should receive the greatest possible attention. The progress of Veterinary Science in all its aspects, for which the All-India Veterinary Association is labouring with such devotion, is a matter of the greatest national importance, a vital matter in which so much yet remains to be done.

I wish the Conference all success in its deliberations. We are happy that Shri Lakshmi Sahai, the Commissioner with the Government of India, is with us on this occasion and will preside over the Conference.

I hope that all the distinguished delegates assembled here for the Conference will enjoy their visit to this State and City and will carry away pleasant memories of this joint meeting.

It is with very great pleasure that I now inaugurate the Silver Jubilee Celebrations of the Mysore Serum Institute and the Thirteenth All-India Veterinary Conference.

APPENDIX III

Mysore Serum Institute Silver Jubilee Celebrations

PRESIDENTIAL ADDRESS

BY

SHRI B. D. JATTI, B.A., LL.B.,
Chief Minister, Mysore State

Your Highness, Ladies and Gentlemen,

I am happy indeed to have this opportunity of participating in the Silver Jubilee Celebration of the Institute which has done so much for the well-being and conservation of the cattle wealth in the State. It was in 1925 that the Mysore Serum Institute made a modest beginning as a Virus Depot. It was then started, with notable foresight, to obviate the difficulties involved in transporting biologicals from Mukteswar at a distance of over 1,600 miles from the State. The original intention in the founding of this depot was apparently to meet only the local needs of biologicals. By and by the institution expanded and has come to be today one of the foremost institutions producing the biologicals in the country. It has full-fledged laboratories and possesses facilities which could enable it to function even as a Research Institute. You will be interested to hear that at the beginning hardly 2 biologicals were produced by this institute whereas today more than 15 products are to its credit and that, apart from serving the needs of the expanded State it is in a position to meet the demands even from foreign countries like, Malaya, Burma, Ceylon and Java.

Practical training in the production of biologicals and research in animal diseases is being imparted in this institute to officers of this State and candidates sponsored by other States. Indeed it has been in a sense a fore-runner of the Veterinary College which we had the pleasure of inaugurating only the other day. The institute is being expanded. It will be housed in a modern building and most up-to-date equipment will be procured for it. In all these matters as usual we expect the generous support and co-operation of the Central Government which I am happy to acknowledge here has never failed us in our demands for such assistance.

To us in Mysore, it is a matter for particular pleasure and pride and that for the second time the All-India Veterinary Conference should have chosen Bangalore as its venue. Most of you are aware, I presume, of the determined efforts being made by this Government for the provision of Veterinary facilities in the rural areas and also to spread the net work of preventive measures as closely as possible forestalling epidemics and preventing their spread.

On the side of livestock improvement also we have endeavoured to devote some attention. We are establishing artificial insemination centres wherever possible and we are also upgrading the local strains of cattle by the provision of pedigree bulls. Livestock improvement can only be achieved by a co-ordinated and comprehensive endeavour; the provision of good stock has to be accompanied by nutritious and abundant feeding facilities and also by other measures concerted to build up the strain of the animals.

It is a good sign that you, experts from all over India, have gathered here and I have no doubt that as a result of your deliberations some concrete course of action will be chalked out which our State Governments can assist in upgrading and conserving the cattle wealth of the country which is really the basis of our agricultural prosperity.

On this occasion of the Silver Jubilee of the Institute, it is only fitting that we should remember with gratitude the work of many officers and non-official gentlemen that has gone into the building up of the great reputation which this institute enjoys to-day. I am sure you will all join me in this acknowledgment of that sterling work and record. To those that are entrusted with this duty of running this institute has fallen the burden of rising to the standards already established and even improve upon them. I am sure, imbued by a sense of patriotism and service to the country as they should be, they will prove themselves worthy of the heritage of this institute and make the maximum possible use of the opportunity for service.

I wish the institute a bright career of service to the country and also of sound scientific achievement.

JAI HIND

APPENDIX IV

The Thirteenth All-India Veterinary Conference

Presidential Address

BY

SHRI L. SAHAI, M.Sc., M.R.C.V.S.,

Animal Husbandry Commissioner with the Govt. of India

Your Highness, Hon'ble the Chief Minister, Chairman and members of the Reception Committee, Ladies and Gentlemen,

At the outset I must thank the All-India Veterinary Association for asking me to preside over this session of the All-India Veterinary Conference. It is, indeed, a great honour and responsibility, but I am confident that with the indulgence and co-operation of you all we shall have a most successful session.

The events that led to the setting up of this Association, the many vicissitudes that it has passed through and the good work that it has done ever since its formation are, I believe, known to all of you and I need not take your time going over them. You will all agree that an Association of this type is the life and blood of every profession and it is, therefore the duty of each one of us to ensure that this Association of ours - this symbol of our brotherhood - continues to flourish and to serve as a bond not only among the several thousands of veterinarians in the country but also between our own and sister professions and between our profession and the Government. This Association is a valuable forum for the discussion of professional and other matters of common interest, but it is our duty to see that we do not forget the real purpose for which it has been established and that in our deliberations we do not digress into matters which do not strictly fall within its purview, for that may adversely affect the future of this very useful organisation. It has not been my good fortune to attend many sessions of the All-India Veterinary Conference. Nevertheless, I am not altogether unaware of the activities of the All-India Veterinary Association and of the deliberations of the various conferences held under its auspices. And I am glad to note that these conferences have largely been concerned with matters of real technical interest and those affecting the progress and welfare of the profession as a whole.

On behalf of the Association I must express my thanks to the Government of the Mysore State, to the State Director of Animal Husbandry, and to the Mysore State Veterinary Association for inviting the All-India Veterinary Association to hold this conference

in this beautiful city of Bangalore. This is not the first time that we are enjoying the hospitality of the State. Many of us have visited this beautiful State many a time before and we all know how willing the Mysore State always is to extend its hospitality to various organisations and others to hold their sessions here and to act, so to say, as the proverbial host. Let me hope that the present meeting as well as the meeting of the Interim Indian Veterinary Council, which is being held here in conjunction with the All-India Veterinary Conference, would provide further stimulus to increased professional interest in this already advanced and enlightened State.

I have just referred to the Interim Indian Veterinary Council. Let me tell you what led to the setting up of this Council. Despite the fact that the All-India Veterinary Association had admittedly done a very good job since its inception, it had been felt for some time that the scope of its activities was somewhat limited. For this reason it was considered desirable to constitute a National Veterinary Council having statutory powers more or less on the lines of parallel Councils existing in the fields of medicine and dentistry.

The International Veterinary Congress also at its session held in London in 1949 recommended that in each country there should be established a National Veterinary Committee to effect liaison between the country and the Permanent Committee of the Congress. This matter was discussed at the joint session of the All-India Veterinary Association and the Bombay State Veterinary Medical Association at Bombay in 1951. At the instance of Shri K. M. Munshi, the then Union Minister for Food and Agriculture, a Steering Committee was set up to examine the proposal and to make suitable recommendations to the Government of India for its implementation. During the deliberations it was brought out that matters veterinary being a State subject it would not be within the competence of the Government of India to pass any legislation in this regard without the concurrence of the State Governments. Consequently, the Steering Committee recommended *inter-alia* that State Veterinary Councils should first be set up by legislation in all the States and that then the Govt. of India should enact the necessary legislation to set up a statutory Indian Veterinary Council. Since the setting up of statutory councils in the various States was likely to take time, the Steering Committee further recommended that, as an interim measure, an Interim Indian Veterinary Council composed of members nominated by the Government of India and the State Governments should be set up under an order of the Govt. of India.

The recommendations of the steering committee were accepted by the Government of India and the Interim Indian Veterinary Council

was constituted in October, 1954, as the fore-runner of the statutory National Veterinary Council. It is, however, disappointing to observe that, despite our best efforts, the necessary legislation has so far been enacted only in the States of U.P, Bombay and Madras. I understand, in the States of Bihar, Madhya Pradesh, Andhra Pradesh, West Bengal and Kerala draft bills for the purpose have been prepared and are under examination by the respective State Governments. I admit that the formalities incidental to the formation of statutory councils in the States are such that it would take some time before these proposals materialize. Nevertheless, some years have already elapsed since we first approached the various State Governments, and to facilitate their task we have prepared a model bill as also model rules and regulations for the operation of the Act. These will now be forwarded to all the State Governments and I hope that the State Directors of Animal Husbandry and the State Veterinary Associations would do their best to see that the necessary legislation is enacted as early as possible. It should then not take long to set up a National Veterinary Council with full statutory powers.

I expect you are all more or less familiar with the various projects for animal husbandry development that were included in the first and the second five year plans. I suppose you would like me to tell you how far we have progressed with the implementation of those projects and what are our plans for the future. I would refer only to our more important schemes and to some of our more important plans, which are still tentative, for the future.

Key Village Scheme :—This many-faceted scheme aims at extensive multiplication of the available superior germ plasm through the establishment of key village blocks spread practically all over the country, and is the most noteworthy project launched for the development of our cattle and improvement of their quality and productive efficiency. This scheme started during the first plan period, when 146 key village blocks were established, each provided with an artificial insemination centre and containing 2000 breeding cows and buffaloes in 4 constituent key-village units. In the second plan provision was made for expanding the area of operation of 108 of the 146 key village blocks set up during the first plan period by the addition of 2 more key-village units and by raising the number of breeding cows and buffaloes to 5000 in each case. Besides, it was decided to set up 124 new blocks, each comprising 6 key-village units and covering a population of 5000 breeding cows and buffaloes, an additional 51 similar centres in conjunction with milk supply schemes, and 70 extension centres each with 50 improved stud bulls, for the general grading up of cattle in areas outside the key-villages and the breeding tracts. We hope that by the end of the second plan

period, it would be possible to establish 150 key-village blocks, 80 extension centres, and 50 artificial insemination centres in urban areas.

Establishment of gosadans :—This scheme, which is a necessary adjunct to the key-village scheme under the peculiar conditions obtaining in our country has, unfortunately, not been making satisfactory progress on account of various difficulties inherent in the scheme itself and certain other un-anticipated and un-foreseen difficulties. During the first plan period only 25 gosadans could be established, and it is hoped to set up 50 more during the second plan period. Efforts are being made to fill the gosadans to capacity and run them as economically as possible, and for this purpose suitably equipped *charmalayas* are also being attached to them.

Gaushala Development :—This scheme provides for conversion of at least a part of every well-managed and fair-sized gaushala into an active breeding centre for the production of improved cattle so that the resources of gaushalas, which number several thousands spread all over the country may be utilized to the best advantage. It is estimated that there are some 1100 major gaushalas in the country offering scope for such improvement. This scheme was included in the second plan and it was proposed to render necessary financial and technical assistance to 346 such institutions so as to place their working on scientific and economic lines and to convert them ultimately into profitable cattle breeding-cum-milk production units. It is anticipated that about 250 gaushalas would be brought under the scheme during the second plan period.

Eradication of Rinderpest :—You must all be familiar with this very important scheme, which came into operation on a pilot basis during the first plan period, when mass vaccination work was taken up in the part of the country south of the River Krishna. The work done under this pilot scheme and the experience gained there from encouraged us to embark on mass vaccination on a country-wide basis. During the second plan period the work has been extended to all the States and up to date some 30 million animals have been vaccinated against a total estimated target of about 100 million. You will be glad to know that in the Mysore State the work was completed in September, 1957. It is hoped that by the end of the second plan period work under this scheme would be completed in all the States except Orissa, Uttar Pradesh, Madhya Pradesh and Rajasthan, in which it will be completed during the first two years of the third plan period. Simultaneously, suitable action is being taken to establish quarantine stations to prevent fresh introduction of the disease from neighbouring countries.

Poultry Development :—The scheme for poultry development, which was included in the second plan, provides for the establishment

of five regional farms of which one will be in the Mysore State and 300 poultry development-cum-extension centres all over the country. Although work on this scheme started rather late and was beset with certain difficulties, all preliminary arrangements for the establishment of the five regional farms have now almost been completed. 134 poultry extension-cum-development centres were established in the first two years of the second plan period and about 50 are likely to be started during the current year. It is expected that 3 lakh one-day old chicks will be produced annually at the five regional farms. This should help to maintain a continuous supply of breeding stock for the State poultry farms and extension centres, and even for distribution to poultry farmers. The success of mass poultry production is largely governed by artificial incubation facilities and these have already been increased to more than three times those formerly available in the country and are further likely to be increased from the previous total capacity of about one lakh hatching eggs per month to about one million eggs per month, i.e., about ten times, by the end of the second plan period. Similarly, artificial arrangements for the rearing of baby chicks will also be increased to an additional 3 lakh chicks at a time. At the same time, it is expected that by the end of the 2nd plan, some 4500 poultry farmers will have received practical training for a period of six weeks, 1500 enlightened farmers will have been financially assisted in regard to the purchase of wire netting, 3 lakh one-day old chicks will have been reared up to the age of 5 months and sold to the poultry farmers after protection against the common infectious diseases, 1500 one-day poultry shows will have been held, and roughly 10 per cent of the entire poultry population in our villages will have been upgraded. All these efforts would naturally lead to considerable increase in the total poultry population of the country as well as the total egg production, which may be of the order of 25 to 30 per cent and 50 per cent, respectively.

Sheep & Wool Development :—Sheep, next to cattle, constitute probably the most important livestock in India. The 40 million sheep in the country produce about 70 million pounds of wool annually, of which the major portion is hairy and coarse. The average clip is poor and varies from $\frac{1}{2}$ to 4 pounds per sheep per year. More than half of the total wool collected is exported, bringing a value of Rs. 120 million. At the same time our woollen mills are annually importing raw or semi-processed fine wool to the extent of 50 million pounds costing not less than Rs. 110 million, thus causing a heavy drain on our foreign exchange resources. Experience of sheep breeding, especially under schemes financed by the Indian Council of Agricultural Research, had led to the formulation of this scheme, which aims at improving the

wool quality by selective breeding among such well known indigenous breeds as the Bikaneri, Deccani, etc, and by cross-breeding of the local sheep in the temperate regions by fine-woolled exotic sheep. The sheep and wool development scheme provides for the establishment of (1) three sheep breeding farms in the States of Himachal Pradesh, Madhya Pradesh and Bombay (Saurashtra Region) for the production of superior breeding rams, (2) Properly equipped fleece-testing laboratories at each of these farms and (3) 396 extension centres in the predominantly sheep breeding tracts. Work towards the establishment of sheep breeding farms has already started in all the States concerned and 215 extension centres are likely to be set up by the end of 1958-59. It has been estimated that if this work of breeding superior stock of sheep is carried out systematically for a period of about 15 years it should be possible to obtain from the extension centres some 40,000 rams which will be able to effect improvement among 2 million sheep annually.

Veterinary Education: The technical manpower requirements for operating the various schemes of animal husbandry development had necessitated early action towards sufficiently increasing the annual output of veterinary graduates, and a number of steps were accordingly taken towards this end. For example, during the first plan period, five new veterinary colleges were set up at Bikaner, Mhow, Cuttack, Bapatla and Trichur; double shifts were introduced at the veterinary colleges at Hyderabad and Hissar and later also at those at Bombay, Bikaner and Patna; a number of colleges were assisted so as to increase permanently their annual admission capacity; and an emergency 2-year training course was started to provide expeditiously a fairly large number of field workers to work under the over-all supervision and guidance of fully qualified veterinary graduates. During the second plan period, most of these schemes are being continued, and, in addition, two more veterinary colleges have been set up, one at Nagpur and the other here at Bangalore. At the same time, a good deal of action has also been taken towards improving the standards of teaching and the facilities required, and also for providing within the country itself adequate facilities for post-graduate training. Thus the veterinary colleges in the country have been linked with 5 LAND GRANT UNIVERSITIES IN U. S. A. under an Inter-institutional agreement. This agreement provides for the deputation of Indian teachers for higher training to the U. S. A., for the supply of laboratory equipment and library books to our colleges, and, for the assignment of experts to the veterinary colleges for teaching.

A model curriculum and model syllabuses for the different subjects were prepared and recommended for adoption after these had been approved at a special conference of Principals of veterinary colleges and subject-matter experts.

A post-graduate college has already started, functioning at the Indian Veterinary Research Institute, Izatnagar, and the Veterinary colleges at Mathura and Madras have also been raised to the post-graduate level to serve the needs in this respect on a regional basis. It is hoped that next year the veterinary colleges at Bombay and Patna will also be similarly raised to the post-graduate level.

The importance of training veterinary workers in extension methods has been emphasized time and again by various authorities. Suitable action is being taken to attach adequately staffed extension wings to all the veterinary colleges, according to a phased programme.

You must also have heard of the proposals for setting up Rural Universities, which will also include college of veterinary medicine. A University of this type is being set up at Rudrapur in Uttar Pradesh. The shifting of the Bengal Veterinary College from Calcutta to Haringhatta will facilitate the establishment of another such University at Haringhatta. The veterinary college temporarily located at Cuttack is being gradually shifted to its permanent site at Bhubaneswar adjacent to the agricultural college there. Here at Bangalore, too, the veterinary college and the agricultural college are located on a common site. We are eagerly looking forward to these veterinary and agricultural colleges working in close collaboration and to their greatest mutual advantage.

You are all aware of the recommendation which was made more than 30 years ago by the Royal Commission on Agriculture in India that there should be at least one veterinary hospital/dispensary for every 25,000 head of cattle. This goal has generally been kept in view in formulating plans of animal husbandry development and particularly those relating to the provision of veterinary aid to livestock farmers. At the moment, this planning has been largely regulated by the division of the country into about 6000 National Extension Service Blocks, and our target for the second plan has been one veterinary hospital/dispensary per NES block or, in other words, one veterinary hospital/dispensary for every 35,000 or so head of cattle on an average. We are now planning to go even beyond the target recommended by the Royal Commission and to provide two veterinary hospitals/dispensaries in each NES block. Each such hospital/dispensary would be under the charge of a fully qualified veterinary surgeon, who will be assisted by 4 to 6 stockmen so that veterinary aid may be easily carried to the very doorsteps of our rural livestock farmers. We hope that it would be possible to achieve this target almost completely by the end of the third plan period and that for manning these, veterinary graduates would be available in sufficient numbers from the existing 16 veterinary colleges and one or

two more which may be opened as constituent units of Rural Universities.

Future Plans :—Besides the schemes which I have just briefly referred to there are a few others which have either already been put into operation or are likely to be taken up in the near future. Among these are schemes for the progeny testing of seven important breeds of cattle and buffaloes to ensure the use of breeding bulls of proved superior qualities, establishment of fodder banks as a measure against famines, rehabilitation of nomadic cattle breeders, improvement of hide flaying and curing, extension of cattle shows, and development of pigs and piggery products.

Schemes for inclusion in the third and the subsequent plans are still in the formative stages and under discussion with the State Governments and other experts. I might, however, take this opportunity of informing you that the schemes which we are thinking of including in our future plans cover such subjects as control of Ranikhet disease on an All-India basis, establishment of regional livestock research institutes, conversion of some of the existing Biological Products centres into regional ones, strengthening of State livestock research stations, raising more veterinary colleges to the post-graduate level, provision of extension wings at the veterinary colleges, expansion of State livestock farms, establishment of a Jersey cattle breeding farm, extension of herd book registration to village cattle in breeding tracts and formation of breed societies, establishment of mixed farming units in river-valley projects, improvement of cattle in hilly regions, establishment of buffalo breeding farms, camel breeding farms, and equine breeding farms, improvement of slaughter-house, setting up of an organisation for regulating the export of meat and meat products, salvage of dry cows, control of wild and stray cattle and prevention of cruelty to animals.

I would not go in detail into these schemes for they are still, as I have said, in the formative stages. But I might say a few words about the important scheme for the control of Ranikhet disease. You are probably aware that the question of control of this disease came up for discussion at the last meeting of the Animal Husbandry Wing of the Board of Agriculture and Animal Husbandry in India. On the recommendation of the Wing a special committee was set up to examine the possibility of controlling Ranikhet disease on an All-India basis. This committee has now prepared a scheme which is at present being examined and discussed with all concerned. It is hoped that it would be possible to finalise the various aspects of this proposal at an early date and to decide how best it should be implemented.

I would not like to take any more of your time except to say how glad we are that this Thirteenth Session of the All-India Veterinary Conference is being held in conjunction with the Silver Jubilee of the Mysore Serum Institute. This Institute was the first of its kind to be established in any State and its contribution to the control of Animal diseases not only in this State but in some other States has been great. As I pointed out a little while ago the work of immunization against Rinderpest under the All-India Rinderpest Eradication Scheme was completed in this State in September last year and it must be a source of no little satisfaction to the Government and the Animal Husbandry Department in this State that the objective with which the Serum Institute was established i.e., to control Rinderpest by producing suitable biological products, has been achieved and that the State is now free from Rinderpest. We are also glad that the State is fully conscious of the fact that there can be no progress without continuous research and that to this end these are being built up at the Serum Institute, facilities which would enable the Department to take up research on many important problems on the solution of which progress in livestock development will largely depend.

The establishment of a Veterinary College, the Regional Poultry Farm (which we hope will soon materialise), the starting of a Milk Supply Scheme at Bangalore, extension of sheep development work, provision of increased veterinary aid, are some of the important recent achievements in which the State Department deserves to be richly complimented. I am sure, the All-India Veterinary Association and the delegates attending the All-India Veterinary Conference, in particular, would wish me to extend to the Animal Husbandry Department and its Director their very best wishes for further progress in the future.

I would thank you once again for having asked me to preside over this Conference.

STANES MINERAL MIXTURE

Stanes Sterilised Fine Bonemeal for Cattle

The only Tonic at low price with high tonic value.
Prevents diseases due to deficiency in CALCIUM and
PHOSPHORUS. Largely used by all the Agricultural
Research Stations in Madras, and by the Veterinary
Departments.

Sold in bags of 14 lbs., 28 lbs., for supply in the Madras Presidency.

For further particulars apply to:—

T. STANES & CO., LTD.,
COIMBATORE

When writing to advertisers, please mention *The Indian Veterinary Journal*.

APPENDIX V

List of Delegates who attended The Thirteenth
All India Veterinary Conference

MYSORE STATE

Messrs.

Abdulla Khan, C. K.
 Abdul Khudus
 Abdul Salam
 Abdul Shukoor Khar
 Aiyappa, A. P.
 Angappa, A. P.
 Annaji Gowda, H. M.
 Appajichar L. R.
 Aralikatti, S. R.
 Balam, S. M.
 Bandiah, H.
 Basavaraj, P. M.
 Beedigari, D. A.
 Bhashyam, H. R.
 Bhat, P. S.
 Bhat, P. V.
 Brahmadev, B.
 Chandrasekhar, B.
 Chandrasekharappa, A.
 Chandrasekharachar, K.
 Chandrasekharayya, H. R.
 Channabasappa, N.
 Chinnaia, G. P.
 Dassanna, H.
 Datar, G. T.
 Deshpande, N. R.
 Doddaramiah, G. V.
 Fernandez, A. D.
 Ganapathy, C. N.
 Gnanaoji Rao, Y.
 Gopal Rao, K. S.
 Gopalakrishna Gupta, C.
 Govinda Naidu, M. R.
 Gowda, A. S. D.
 Gowda, B. T. D.
 Gowda, K. V.
 Gunjal, C. F.
 Habibullah, S.
 Handigol, D. G.
 Hardikar, G. A.
 Hegde, C. R.
 Hegdegatte, V. M.
 Hiremath, N. B.
 Iraddi, H. R.
 Iyengar, R. D. S.
 Iyengar, M. R. L. N.
 Jaipal, A.
 Jambulingam, A. M.
 Jambagi, S. K.
 Janakiram, V. S.
 Javaganda, G. B.
 Joshi, G. G.
 Joshi, N. H.
 Joshi, S. V.
 Kadiwal, P. M.
 Kallappa, C. D.
 Kamalapur, P. N.
 Kamalanathan, R.
 Kamath, R. R.
 Karumbiah, P. P.
 Kazi, A. M.
 Kotbagi, V. M.
 Krishnappa, K. S.
 Krishnappa P. T.
 Krishna, N. M.
 Krishnan, T.
 Krishnamoorthy, N.
 Krishnamoorthy, C. G.
 Krishnamoorthy, A. N.
 Krishnamoorthy, R. N.
 Krishnamoorthy Vasant,
 Krishnamachar, C.
 Krishna Rao, N. S.
 Krishna Rao, T.
 Krishnamachar, B. R.
 Krishnaswamy C. T.

Messrs.

Krishna Singh, B.
 Kudus, K. S.
 Kuddus, C. A.
 Kulkarni, N. M.
 Kulkarni, S. P.
 Kulkarni, N. G.
 Kumkur, M. G.
 Kuppaswamy, B. M.
 Kuppaswamy Mudaliar, V. S.
 Linga Gowda, N. M.
 Loknath, S. M.
 Madhava Rao, B.
 Mahanta Shetti, M. M.
 Madhaviiah, D. C.
 Malli, V. V.
 Malliah, K.
 Malraj Urs, M.
 Mannur, Y. T.
 Margoob, U. M.
 Michael, J. S.
 Mirjee, V. S.
 Md. Ishaque, C.
 Mohomed Hussain,
 Mohomed Ibrahim, B. K.
 Mukundu, P. N.
 Muniappa, J.
 Murthy, K. K.
 Murthy, K. N.
 Murthy, B. S. S.
 Murti Rao, D. N.
 Muthanna, P. G.
 Nagappa Pai, K.
 Nagaraj, M.
 Nagesh Rao, H. M.
 Naik, R. H.
 Nagaraj, G. S.
 Nagaraja Rao, T. S.
 Naidu, M. R. G.
 Nanjiah, R. D.
 Nanjangud
 Nanjappa, P. N.
 Nanasawmy Rao, M. R.
 Narlur, M. H.
 Narayana Rao, C. R.
 Narayana Rao, N.
 Narayana Rao, Yergolkar
 Narasimhamurthy, D.
 Narayanaswamy, M.
 Neelakantappa, R.
 Parthasarathy, S.
 Phadke, L. B.
 Patil, R. F.
 Patil, V. K.
 Paul, G. R.
 Pouranik, V. D.
 Prabhakar Rao
 Puttaswamy, C.
 Radhakrishna, B.
 Raghavendrachar, S. G.
 Raghavan, A. P.
 Raichur, G. B.
 Rai, B. N.
 Rajanna, R. N.
 Rajgopal Setty, D. K.
 Raja Rao, B. S.
 Rama Das, V.
 Rama Rao, L.
 Rama Rao, M.
 Rama Rao, H. K.
 Rama Rao, P.
 Rama Rao, W.
 Raman, B. V.
 Ramachandra Rao, K. R.
 Ramachandra Rao, P. S.
 Ramachandra Shetty, H.
 Ramaswamy, H. S.
 Ramaswamy, G. S.
 Ramaswamy, S. V.
 Ramamurty, A.
 Ramiah Setty, D.
 Rangaswamy, H. R.
 Ravi Verma Hegde, R.
 Reddy, P. H. T.
 Rudraiah, D.
 Sangli, P. N.
 Sastry, M. S.
 Sathkar, V. B.
 Satyendra Rao, P.

Messrs.

Satyanarayana Shetty, S. V.	Sundaramurty, A.
Sayed Abdul Rahiman,	Sundaram, S. K.
Sayyed, S. A.	Sundaram Hegde
Shekaran, M. G.	Syed Habibulla
Shrimurthy, K.	Syed Mohamed
Shriraman, K. S.	Syed Mohiyuddeen
Shivappa Rai, Y.	Thimmiah, K.
Shamanna, Y. N.	Thimminappa Rai, M.
Shivalingappa, G. N.	Thimmarayappa, K. N.
Siddappa, T. N.	Thiruvikrama Rao, K.
Singarachar, A. N.	Thite, R. B.
Sindhia Rama Deva, K.	Uthappa, I. M.
Sivasiddalingiah, T. G.	Umarjee, M. R.
Srikantiah, G. N.	Vaidya, S. N.
Srikantiah, G. M.	Vasudeva Mudaliar, D. N.
Srinivasa Rao, A.	Venkataswamy, C.
Srinivasa Rao, M. V.	Venkatramiah, M. S.
Srinivasa Rao, A. V.	Venkatramiah, S.
Srinivasan, G. A.	Venkatesiah, B.
Srinivas, V.	Venkatachar, K. T.
Sreenivasa Murty, K.	Veerabhadrappe, G.
Subramanyam, K. J.	Veeranarayana Gowda, D. K.
Subramanyam, B. L.	Veerendra, M. K.
Subramania Shetty, M.	Veerappa Gowda, K.
Subba Rao, M.	Venugopal.
Subba Rao, K. N.	Vijayendra Rao, N. R.
Subba Sastry, G. N.	Viswanatha Rai, A.
Sunder Rao	Vittal Mally, K.

MADRAS STATE

Alwar, V. S.	Pattabhiraman, D.
Jayaraman, M. S.	Sivaraman, T.
Kandaswamy Raju, K.	Rai, B. N.
Krishnamoorthy, C. R.	Ramalinga Reddy, D. Y.
Mudaliar, S. V.	Tilak, C. T. V.
Osman Khan, G.	Vinayaka Mudaliar, T.

ANDHRA PRADESH STATE

C. G. Bhasker.	M. Mahalingam.
----------------	----------------

KERALA STATE

K. S. Nair.	M. N. Menon.
-------------	--------------

BOMBAY STATE

Balakrishnan, C. S.	Phadke, Rao Bahadur V. R.
Chadha, S. R.	Rama Rao, V. S.
Khare, V. G.	Sharma, V. N.

DELHI

Lakshmi Sabai	R. N. Mohan.
---------------	--------------

RAJASTHAN STATE

Mr. & Mrs. W. F. Guard.

KASHMIR STATE

Prithivinath Bhan.

BENGAL STATE

Anupam Chatterji.	Chakravarthy, S. K.
Mrs. A. Chatterji.	Mrs. Kamala Dutt.
Banerji, W. J.	Das, B. B.

APPENDIX VI

List of persons who have announced their Contributions
as follows

	Rs. nP.
Sri Rao Bahadur V. R. Phadke, Poona	50-00
„ G. N. Srikantiah, A.D., A.H., Tumkur	50-00
„ Rama Rao, Poona	10-00
„ G. A. Hardikar, D. D. Mysore Serum Institute	100-00
„ Madhava Rao, D.V.O., Gulbarga	50-00
„ B. N. Rai, D.V.O., Raichur	50-00
„ Krishnamurthy Retd. D.V.O., Mysore State	25-00
„ N. R. V. Rao, Supdt., Milk Supply, Bangalore	25-00
„ K. S. Gopal Rao, Arsikere	25-00
„ V. N. Sharma, Principal, V.C., Nagpur	50-00
„ A. Srinivasa Rao, Yaligiri	25-00
„ V. R. Patil, Sangnur village, Dharwar Dt.	50-00
„ Tilak, I.C.I., Madras	116-00
„ Nanjiah, Mysore Vety. College	25-00
„ D. N. Vasudeva Mudaliar, Hq. A.D. ?	25-00
„ T. Krishna Rao, Mandya	25-00
„ Madras Vety. Asst. Surgeons' Service Association, Madras	25-00
„ V. Ravi Verma Hegde, Mysore Vety College	25-00
„ B. M. Kuppuswamy, Saklespur	25-00
„ S. Parthasarathy, D.V.O., Dharwar	25-00
„ K. N. Subba Rao, Mysore	25-00
„ A. Ramamurthi, Nelamangala	15-00
„ C. K. Abdula Khan, Mysore Serum Inst.	25-00
„ G. M. Srikantiah, Koppa	15-00
„ Vety. Officers of Belgaum District	120-00
„ Veterinary Officers of Dharwar Division (besides the six already paid)	120-00
„ Veeranarayana Gowda, Agrl. College, Hebbal.	25-00
„ J. Muniappa, D.D.A.H., Mysore	100-00
„ L. Rama Rao, Tumkur	10-00
„ Syed. Habibullah, Kortagere	10-00
„ K. Veerappa Gowda, Bangalore	50-00
„ Coorg Vety. Assistant Surgeons	25-00
„ G. N. Subba Sastry, Sidlaghatta	25-00
„ K. T. Venkatachar, Hassan	10-00
„ Phadke, Hosadurga, in ten instalments	100-00
„ G. S. Nagaraj, Tiptur	10-00
„ R. N. Rajanna, Chinaickenhalli	10-00
„ T. G. Sivasiddalingiah, Hirur	10-00
„ Narayan Rao, Yergolkar, Raichur	10-00
„ A. V. Srinivasa Rao, Anandapuram	10-00
„ H. G. Raghavendrachar, Channapatna	10-00
„ Ramadas, Kanakapira, Bangalore Dt.	10-00
„ C. Gopalakrishna Gupta, Sagar	10-00

Association News

The All-India Veterinary Association

THE RESERVE FUND

An event of great importance to the Veterinary profession in India, took place in August 1924. It was the birth of the *Indian Veterinary Journal*. Circumstances were positively hostile and yet the profession took that bold step and the lion-heartedness of the early pioneers cannot be too highly praised. Ever since then, the *I.V.J.* has toiled hard under very adverse circumstances. The *I.V.J.* lives to-day so that the profession could prosper and science advance.

And now the hat is sent round so as to place this journalistic venture on a sounder and firmer basis. The *I.V.J.* is a priceless possession of our profession. It has placed the Indian Veterinary Surgeon, on the map of the scientific world. Just pause and ponder over, how much we owe to the Journal both individually and collectively. Is it too much then to expect the profession to respond to the appeal issued for a Reserve Fund? We hope not.

Some enquiries have come to us asking us to indicate the extent of help expected. We do not want to put the members of the profession to any undue financial strain in these hard days. At the same time, a certain amount of sacrifice is needed to make this fund a great success, so as to make it worthy of our profession. So we feel that the following scale of contribution will be quite reasonable. It could even be paid in two or three instalments.

Class I Officers	...	Rs. 100/- and above.
Class II Officers	...	Rs. 50/- and above.
All others	...	Rs. 25/- and above.

It is our ambition that no Veterinary Surgeon in this land should remain without contributing to this fund. Brick by brick, this great edifice of our's should begin to rise higher and higher. On the success or otherwise of this venture, the solidarity of our profession depends. "Pay and Prosper" is the slogan we pass on to the members of our profession.

Jai Hind!

T. VINAYAKA MUDALIAR,
Editor, *The Indian Veterinary Journal*.

NOTICE

Members of the profession, all affiliated Branches and such other interested institutions and offices, are requested to note the change of address of the Office of the General Secretary. The office will move from Madras to Bangalore on 1-12-58. Address:-

Sri V. S. Kuppuswamy Mudaliar, G.M.V.C.P.G., General Secretary,
The All-India Veterinary Association,
No. 797, 18th Cross, Malleswaram,
Bangalore-3, P.O. (Mysore State).

All correspondence should in future be sent direct to the above address.

Madras, }
28-11-58. }

T. VINAYAKA MUDALIAR,
Retiring General Secretary, A.I.V.A.

THE I. V. J. RESERVE FUND

LIST OF CONTRIBUTORS

	Rs. nP.
Amount acknowledged in November 1958 issue	2,138 80
Dr. K. S. Krishnappa (May & Baker India, Ltd.), Bangalore	100-00
" Madhusudhan, V.O., Gulbarga, Mysore	100 00
" P. Rama Rao, V.S., Byndoor, Mysore	51-00
" S. V. Mudaliar, Retd. Principal, Madras Vety. College	50-00
" M. Mahalingam, Principal, Sitarampet, Hyderabad, A.P.	50-00
" K. S. Sriram, Retd. V.I., Bangalore, Mysore	50-00
" B. Chandrasekhar, R.O., A.H., Ajjampur	25-00
" S. V. Ramaswamy, W.D.O., Hosadurga, Mysore	25-00
" C. Brahmadev, V.I., Sira, Mysore	20-00
" M. V. Sreenivasa Rao, Supdt., Sheep & Wool Dev., Ranebennur	25-00
" C. Puttaswamy, Dairy Officer, Bhadravathi, Mysore	10-00
" D. G. Handigol, V.I., Hospet	10-00
" S. S. Ramaswamy, V.I., Sorab	10-00
" Ramadev Siddhya, V.I., Thirthahalli	10-00
" R. H. Naik, V.O., Aikyalu, Dharwar	10-00
" P. N. Kamalapur, V.O., Devi, Hosur	10-00
" N. H. Joshi, V.O., Sirsi, N.K.	10-00
" G. F. Gunjal, V.S., Bijapur	10-00
" P. H. Thippiah Reddy, V.I., Chitaldrug	10-00
" S. R. Arralikatti, V.O., Chikodi	10-00
" S. S. Batra, A.R.O., N.D.R.I., Bangalore	10-00
" P. N. Bhan, V.S., Jammu & Kashmir State, N.D.R.I., Bangalore	10-00
" S. A. Sayeed, A.V.S., Gulbarga	10-00
" V. V. Malli, V.O., Kundgol	10-00
" S. P. Kulkarni, V.O., Mysore State	10-00
" T. N. Sidappa, V.O., Kurikuppi Farm, Bellary	10-00
" K. S. Kudri, V.O., Byagal	10-00
" V. D. Puranik, V.O., Ron	10-00
" R. B. Thite, V.O., Gokak	10-00
" N. M. Krishna, V.I., Nanjankud	10-00
" G. Veerabadrappa, V.I., Devanagari	10-00
" H. Bandiah, V.I., Shimoga	10-00
" U. A. Margoob, V.I., Periapatna	10-00
" P. M. Basavaraj, V.I., Malakalmur, Chitaldrug	10-00
" P. S. Ramachandra Rao, A.V.S., Manvi, Raichur	10-00
" M. R. Govinda Naidu, V.I., Chennarayapatnam	10-00
" R. R. Kamath, V.A.S., Uppinangady, S.K.	10-00
" Syed Abdul Rahman, A.V.S., Devdrug, Raichur	10-00
" P. M. Kadiwal, A.V.S., Kushtiki, Raichur	10-00
" B. L. Subramanyam, V.I., Ramnagar, Bangalore	10-00
" S. V. Satyanarayana Chetty, Pavagada	10-00
" C. Abdus Kudus, V.I., Mysore	10-00
" M. Nagaraj, V.I., Hosanagar	10-00
" D. Narasimhamurti Rao, V.I., Hunsoor	10-00
" T. M. Sivalingappa, V.I., Holalkeri	5-00
" Mukundu, V.I., Mysore Serum Institute	5-00
Sri H. N. D. Urs, Student, Vety. College, Bangalore	1-01
Dr. Lakshmi Sahai, Animal Husb. Commissioner, New Delhi	100-00
" K. Malliah, Hesserghatta, Mysore	100-00
" G. Biswal, Principal, Vety. College, Cuttack	25-00
" Syed Mohiyuddeen, D.I.O., Hebbal, Bangalore	25-00
" G. T. Datar, V.O., Hirekerur, Dharwar	10-00
" Y. T. Mannur, C.B.S., Bankapur, Dharwar	10-00
" A. M. Kazi, V.O., Jamkhandi	10-00
" G. G. Joshi, V.O., Gadag, Dharwar	10-00
" B. R. Krishnaswamy, V.O., Ranebennur, Dharwar	10-00
" B. N. Sangli, V.O., Muddebihal, Bijapur	10-00
Total	3,295-81

Cheques, money orders and all correspondence should be addressed to the Editor, *The Indian Veterinary Journal*, Madras-17.

KZ m 2, n 2 4

158-30-12

ADVERTISEMENTS

VETERINARY SPECIALITIES
OF



»Bayer«
Leverkusen, Germany

- ANTIMOSAN** : An injectable organic antimonial, specific for bovine schistosomiasis. Excellent tolerance. Also indicated in haemorrhagic filariasis in horses, lungworm in cattle, sheep and goats, and dirofilariasis in dogs.
Boxes of 5 amps. of 50 cc. Bottles of 500 cc.
- ARICYL** : A well tolerated arsenical tonic for injection. Promotes growth and blood formation. Cures skin diseases and stimulates skin regeneration.
Strength I for small animals: Boxes of 10 amps. of 1 cc.
Strength II for large animals: Boxes of 5 amps. of 10 cc.
- NAGANOL** : The renowned remedy for surra. For prophylaxis, can be applied i.m. in combination with hyaluronidase.
Bottles of approx. 14 g., 28 g., and 100 g.

Sole Importers in India:

CHOWGULE & CO., (HIND) PRIVATE LTD.,

P.O. BOX 1478, BOMBAY 1.

Branches:

P.O. BOX 8943, CALCUTTA 13.

P.O. BOX 3738, MADRAS 2.

Move Forward in Veterinary

MASTISIN

An oral treatment cures all forms of mastitis; increasing quality and quantity of milk. Also indicated in PASTURELLOSIS, TRYPA NOSOMIASIS, NASAL SCHISTOSOMIASIS etc.
Available in Cattle and Goat sizes. 2 lbs & 1 lb packing, with an ointment. Price: Rs. 6.25 & Rs. 2.25 respectively.

For Free Samples Remit 50 nP. Stamp.

CANCERINA lbs 6 & **PRANAVA** lbs 3 (For External Dressing)

Is a full course for one animal, specially indicated with success in CANCEROUS HORN.
Price Rs. 15.50

Rail route is cheaper for which give the nearest Rly. Station. Orders by Post must accompany 50% advance to cover Postage etc.

DEE BEE BROTHERS

1706, KHADIA JALOWALI NAKA, AHMEDABAD-1

BOOKS ON POULTRY SCIENCE

	Rs.	nP.
AMSDEN: Poultry Breeding and Management 1956 illd.	11	25
ALEXANDER: Hens on the Land 1948 illd.	4	50
BRADLEY: Structure of the Fowl 1950, 23 plates &c.	12	19
CARD: Farm Poultry Production 1948 230p. illd.	14	75
do: Poultry Production 1956p. 416p. 216 illns. 4 plates &c.	22	50
CHARLES: Commercial Poultry Farming 1950 540p. 240 illns.	24	75
DE SAULLES: Pictorial Poultry Keeping 1955	11	25
KNANDEL: Profitable Poultry Keeping 465p. illd. 1951	25	50
MANN: Poultry Breeding illd.	5	50
MARSHALL: Egg incubation 1952	1	57

Available from

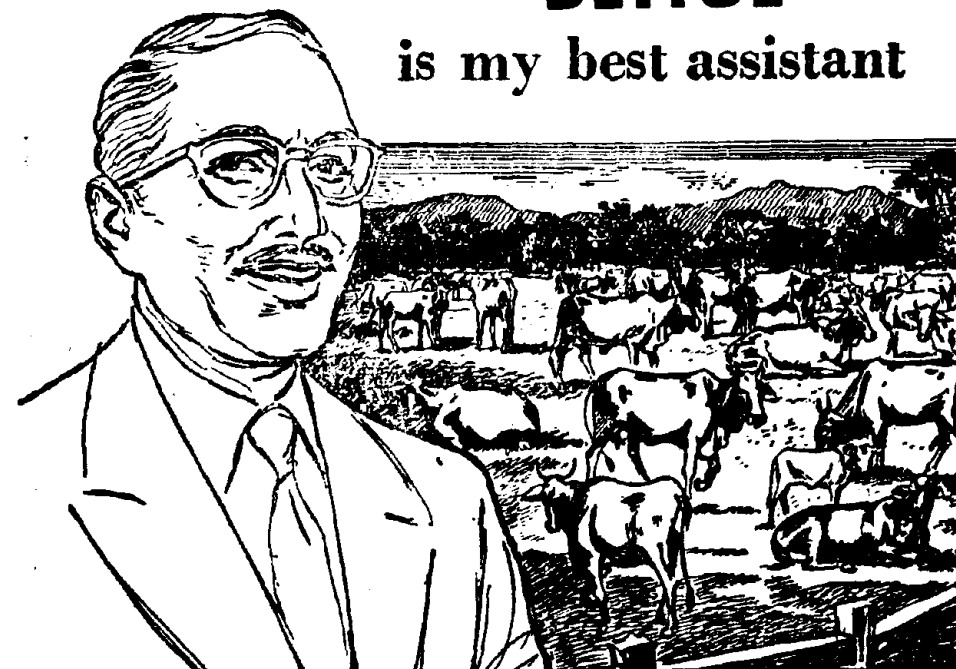
SVASTIK SALES COMPANY,

VETERINARY BOOK-SELLERS
PAREL - BOMBAY - 12

When writing to advertisers, please mention *The Indian Veterinary Journal*.

ADVERTISEMENTS

'DETTOL'
is my best assistant



Thousands of tons of milk and thousands of head of cattle are lost in India through infection—Mastitis, contagious abortion—and primitive post partum protection. To combat this, veterinarians are holding 'classes' to teach farmers the methods of prevention.

In all phases of prevention 'Dettol' Antiseptic is extensively used in India. No wonder the veterinarian says, "My best assistant is Dettol"

'DETTOL'
The antiseptic
doctors use



'Dettol' helps the veterinarian to fight sepsis
As an antiseptic 'Dettol' leads the field. Safe, non-poisonous, pleasant to use and long-lasting in effect, it prevents all kinds of external infection. Whether he is treating a cow for a small wound or during parturition the veterinarian knows that 'Dettol' is the best protection against germs.

ATLANTIS (EAST) LTD.
(Incorporated in England)

AEL 957

When writing to advertisers, please mention *The Indian Veterinary Journal*.

ADVERTISEMENTS

LOCULA

10%, 20% 30%, Solutions, and 10% Ophthalmic
Ointment of Sodium Sulphacetamide

for

CONJUNCTIVITIS AND OTHER
FORMS OF INFLAMMATORY
DISEASES OF THE EYE.

DERMO-QUINOL

(4% & 8% Indochloro-oxyquinoline in a vanishing cream base)

Local application gives prompt relief from pruritus in various
forms of Diseases of Skin including Pruritus Vulva.



EAST INDIA PHARMACEUTICAL WORKS LTD.

CALCUTTA - 26.

VETERINARY BOOKS

SMITH: Veterinary Pathology 1957	... \$17.50
KELSER: Manual of Veterinary Bacteriology 1948	... 50 sh.
GAIGER-DAVIES: Veterinary Pathology & Bacteriology 1957	... 42 sh.
SMYTHE: Veterinary Ophthalmology 1958	... 42 sh.
WRIGHT: Veterinary Anaesthesia 1958	... 30 sh.
WIRTH: Veterinary Clinical Diagnosis 1956	... 25 sh.
DOLLAR: Veterinary Surgery 1957	... 42 sh.
FRANK: Veterinary Surgery Notes	... 86.50
BAILLIERE: Animal Diagrams	... 40 sh.
UDALL: Veterinary Medicine	... 72 sh.
HOARE: Veterinary Materia Medica & Therapeutics 1956	... 42 sh.
LAPPAGE: Veterinary Parasitology 1957	... 63 sh.
RICE: Breeding & Improvement of Farm Animals 1958	... 88.50
ROBERT: Veterinary Obstetrics & Genital Diseases 1956	... 11.00
PERRY: Artificial Insemination of Farm Animals	... 5.00
57 AUTHORS: Disease of Cattle	... 16.00
40 AUTHORS: Canine Medicine	... 18.00
BLOOM: Pathology of Dog & Cat	... 12.00
Swami Sivananda Yogic Way to Cure Diseases	... Rs. 12.00

OUR PUBLICATIONS

MUKHERJEE: Veterinary Bacteriology 1956	... Rs. 12.50
CHAUDHURI: Practical Dairy Science & Laboratory Methods 1958 New about	Rs. 10.00

For Veterinary Books of all branches, please write to:

SCIENTIFIC BOOK AGENCY

103, Netaji Subhas Road, Post Box No. 239

CALCUTTA, 1. (India)

When writing to advertisers, please mention *The Indian Veterinary Journal*.

ADVERTISEMENTS

Telegram—CRESCENT

Telephone—34-3104

RINDERPEST ERADICATION SCHEME

BRAND VACCINATED ANIMALS WITH "P.E.W. BRANDING INK"

Beware of Imitation.

Do not be misled by spurious makes.

A scientific chemical combination.

Produces a lasting and distinctly visible brand, usable on Cattle and Buffaloes and other domesticated animals. Application is very easy, quick and absolutely economical. No wastage. Already in use in all Indian States. Innumerable animals have been branded in all States under Rinderpest Eradication Scheme with success.

It permeates into the layers of the skin evenly upto follicular layer over the branded area and forms an antiseptic dry scab that peels off in a few weeks, leaving a well defined visible brand mark. It does not produce any open wound and thus prevents extraneous infection.

ALREADY SUPPLIED TO ALL THE DIRECTORATES OF VETERINARY SERVICES AND ANIMAL HUSBANDRY IN INDIA.

TRY ON YOUR ANIMALS ALSO.

This can be supplied in any quantity on order. Use our make special type of Branding Iron manufactured for the purpose.

G.T.V. SETS AND STAINLESS G.T.V. NEEDLES
ARE ALSO SUPPLIED BY US.



For further particulars, please apply to:

PAUL'S ELECTRO WORKS

39, JORAPUKER SQUARE

Post Box No. 11406

CALCUTTA-6

When writing to advertisers, please mention *The Indian Veterinary Journal*.

BAILLIÈRE, TINDALL & COX

Veterinary Clinical Diagnosis

By Professor David Wirth, formerly Director of the Medical Clinic in the Veterinary High School, Vienna.

Translated, revised and adapted to the requirements of English veterinary practice by Annie I. Littlejohn, B.V.Sc. (Liv.), M.R.C.V.S.

This practical book has an illustration accompanying almost every page of instruction.

"A practical and elusive subject has found a concrete shape in this book and it speaks to us like a first-rate clinical lecture in a well-ordered clinic, with the aid of highly realistic illustrations. It is a remarkable book...."

— *The Indian Veterinary Journal*.

"The illustrations are numerous and so good that if they were collected together they, in themselves would make an excellent 'Aids to Diagnosis'."

— *British Veterinary Journal*.

"This book has vastly impressed me. Never before have I been so interested in a work of this kind."

— *Journal of the Royal Army Veterinary Corps*.

240 pages. 213 illustrations. Price 25s. Postage 1s. 9d.

A Handbook of Animal Physiology

By E. N. Pantelouris, B.Sc., Ph.D., Institute of Animal Genetics, Edinburgh. A book designed to provide students preparing for Veterinary, Biological and Agricultural degrees with a sound introduction to the main facts of animal physiology.

"The author has succeeded in admirably condensing the salient features while maintaining a good balance.... the result is interesting, readable and quite valuable."

— *The British Veterinary Journal*.

"The book can be recommended, not only to the student beginning his physiology course, but to all those who wish to refresh their memories of the broader aspects of general physiology."

— *The Veterinary Bulletin*.

264 pages. 58 illustrations. Price 25s. Postage 1s. 9d.

Veterinary Ophthalmology

By R. H. Smythe, M.R.C.V.S., Formerly examiner in surgery to the Royal College of Veterinary Surgeons.

This edition contains much new material and additional illustrations. It continues to emphasise the difference between animal and human vision, and provides detailed explanations of many physiological disparities which hitherto have not been completely apparent. The first section of the book covers the anatomy and physiology of domesticated animals and a great variety of other species. The second section deals with the clinical and surgical aspects of animal ophthalmology.

"Smythe's Veterinary Ophthalmology has come to stay and will be acknowledged as the classic textbook on the subject for many a long day to come."

— *Journal of the Royal Army Veterinary Corps*.

Second Edition 380 pages. 59 illustrations. Price 42s. Postage 2s. 3d.

7 & 8 HENRIETTA STREET, LONDON W.C. 2.