

tested; seven gave atypical reactions and have not yet been tested; one showed no reaction to the injection and died to the test; the remaining twenty gave negative results to the injection and have not yet been tested.

“ C ”—PIECE OF LYMPHATIC GLAND GRAFTED ON LYMPHATIC GLANDS.
(40) *Heifer* 650.—A Cape Colony animal; about one year old.

Treatment.—On the 2nd March, 1910, a piece of the lymphatic gland of ox 337 [contracted East Coast fever from intrasplenic injection of spleen pulp, Experiment II (2)] was grafted on to the right prescapular gland of heifer 650.

Result.—A reaction followed, but the examination of the blood, the lymphatic glands, and even of the spleen, all proved negative. The animal died on the twenty-first day of East Coast fever.

Post-mortem examination.

The condition was good; the pleural cavities contained some liquid; the pericardium contained 60 c.c. of a slight yellowish liquid; the right prescapular lymphatic gland was surrounded by slight infiltrated tissue; in the middle of a gland was a small necrotic piece of tissue; the gland was swollen; there was a haemorrhagic injection of the sinuses.

Lungs: Had collapsed; the anterior lobes showed slight emphysema; the right lung showed hypostasis; the pleura was whitish and showed few filaments. On section some blood exuded and some ecchymoses were noted; the trachea showed a few small ecchymoses; the bronchial and mediastinal lymphatic glands were slightly swollen.

Heart: The left endocardium showed a few ecchymoses and petechiae on the papillary muscle; a well-formed blood coagulum was noted; the right endocardium was spotted with petechiae and a well-formed blood coagulum was present; the myocardium was soft; the epicardium showed a few ecchymoses near the apex.

Liver: Was swollen and of a dark-brown colour; on section it had a dark-brown granular appearance; the lobuli were not distinct; the venal lobulares were injected; the periportal lymphatic glands were moist; liquid bile of a greenish-yellow colour was noticeable; the mucosa of the bladder was swollen, and injection of blood was seen.

Spleen: The spleen measured 52 cm. \times 15 cm.; on the dorsal part of the capsula were a few blood clots and the pulp showed a few dark patches in that portion, otherwise it was of a dark-brown colour and soft; the whole parenchyma was protruding.

Stomach: The fourth stomach contained food; the mucosa was diffusely hyperaemic and a slight oedema of the folds and a few ulcers were noted; the omasum had dry contents.

Small intestines: The serosa of the rumen showed some ecchymoses; the duodenum was slightly congested; the jejunum contained bile-stained mucus; the mucosa was swollen and showed haemorrhagic infiltrations; some places were slightly swollen; the ileum was slightly swollen and diffusely reddened.

Large intestines: The caecum was of a diffuse reddish tinge; distinct ramifications of the vessels was noted; the vessels were bloodless; the mucosa of the colon was pale and a few slight hyperaemic patches were observed.

Kidneys: Were small and dark-red in colour; irregular spots were seen on the renuli; these corresponded on section to a small haemorrhagic infarct entering through the cortex and intermediate zone into the medulla; the cortex and intermediate zone were dark-red; in the medulla were some hyperaemic spots; the capsule was easily detachable.

Cause of death: East Coast fever.

Result obtained from grafting a piece of Lymphatic Gland on to Lymphatic Glands.

In the heifer where a piece of the lymphatic gland of an ox which died of East Coast fever was grafted on to the lymphatic glands, the disease followed and the heifer succumbed on the twenty-first day.

“ D ”—INTRALYMPHAL INJECTION OF BLOOD.

(a) *Blood of Heifer* 923.

Heifer 923, an English heifer which contracted East Coast fever from the infestation of infected ticks, and was killed *in extremis* [vide Experiment I (f)].

(41) *Heifer* 1013.—A Cape Colony animal; about two years old.

Treatment.—Injected on the 22nd March, 1910, into the right preescapular gland with 20 c.c. defibrinated blood of heifer 923.

Result.—No reaction followed.

Immunity Test.—On the 10th June, 1910, twelve brown nymphae of heifer 923 (reference number 153) were placed on heifer 1013. After an incubation time of thirteen days a reaction ensued, typical for East Coast fever, during which plasma bodies were found in the lymphatic glands and *P. parvum* in the blood, daily increasing in numbers. From the twenty-fourth to twenty-sixth days *P. parvum* was noted. The animal died on the twenty-seventh day after infestation.

(b) *Blood of Heifer 928*.

Heifer 928, an English animal which contracted East Coast fever from ticks [*vide* Experiment III (*h*)].

(42) *Ox* 1024.—Received from the Transvaal; history unknown; aged.

Treatment.—Injected on the 17th May, 1910, into the right and left preescapular glands with 50 c.c. fresh blood of heifer 928.

Result.—No reaction.

NOTE.—This animal has not yet been tested on its immunity.

Summary of Results obtained from the Intralymphal Injection of Blood.

The intralymphal injection of blood did not give rise to the disease in the two experimental animals; one animal was tested later with ticks and died of East Coast fever; the other has not yet been tested.

EXPERIMENT No. IV.—SUBCUTANEOUS INJECTIONS.

“ A ”—INSERTION OF A PIECE OF SPLEEN.

(a) *Spleen of Cow 677*.

NOTE.—Cow 677 contracted East Coast fever from the infestation of infected ticks [*vide* Experiment I (*d*)].

(1) *Heifer* 829.—Received from the Transvaal; about one year old; history unknown.

Treatment.—On the 13th December, 1909, a piece of spleen from cow 677, measuring 10 cm. \times 12 cm. was inserted subcutaneously into the right shoulder of heifer 829.

Result.—During the first six days a reaction was noted, due to the operation, after which the temperature remained within normal limits. Between the seventeenth and twenty-third days another reaction ensued similar to the first one, during which the examination of the blood proved negative.

Immunity Test.—On the 10th February, 1910, heifer 829 was tested on its immunity by the infestation of four brown adults off heifer 677 (reference number 225). No reaction ensued. On the 3rd March, 1910, four ticks off heifer 592 were placed on this animal, and again no reaction ensued.

On the 24th March, 1910, a number of infested brown nymphae of calf 700 (reference number 309) were placed on. About seventy became attached within two days. No reaction followed this infestation. On the 2nd July, 1910, brown nymphae from cattle 923, 917, and 700 (reference numbers 268, 335, and 309) were placed on heifer 829; no reaction followed.

“ B ”—INSERTION OF LYMPHATIC GLANDS.

(a) *Lymphatic Glands of Cow 677.*

NOTE.—Cow 677 contracted East Coast fever from the infestation of infected brown adults, and was killed on the 13th December, 1909 [vide Experiment I (d)].

(2) *Heifer 896.*—Purchased in the Transvaal; about two years old; history unknown.

Treatment.—On the 13th December, 1909, one mamur and one subiliacal lymphatic gland of cow 677 were placed under the skin of the right shoulder under aseptic conditions.

Result.—An irregular temperature occurred during which the examination of the blood gave negative results.

NOTE.—This animal was used later for intralymphal injection of lymphatic gland juice of heifer 917 [vide Experiment III (11)] and of heifer 897 [vide Experiment III (35)] without contracting East Coast fever. It has not yet been tested on its immunity by the infestation of ticks.

“ C ”—INJECTION OF LYMPHATIC GLAND JUICE.

(a) *Lymphatic Gland Juice of Heifer 884.*

NOTE.—Heifer 884 contracted East Coast fever from the intrasplenic injection of spleen pulp of ox 337 and was killed *in extremis* [vide Experiment II (6)].

(3) *Calf 877.*—About seven months old; born at the Laboratory.

Treatment.—On the 23rd March, 1910, injected subcutaneously with 100 c.c. lymphatic gland juice of heifer 884.

Result.—There was an immediate irregular reaction with high records. The blood was examined on alternate days, and on the twelfth day *P. bigeminum* was seen.

The animal died on the seventeenth day from acute East Coast fever; plasma bodies were found in large numbers in all organs on *post-mortem* examination.

Post-mortem examination.

The condition was fair; the mediastinum was infiltrated; the pericardium contained 30 c.c. liquid.

Lungs: Had not collapsed; the left lung showed hypostasis; the trachea was oedematous and contained foam; the mediastinal lymphatic glands were slightly oedematous.

Heart: The ventricles were empty; petechiae were noted on the endocardium.

Liver: Was swollen; on section it had a light yellowish-brown colour; it was friable and areolated; the periportal lymphatic glands were swollen; the bile was of a dark-greenish colour.

Spleen: Measured 32 cm. × 12 cm.; the capsule had slightly contracted; petechiae were noted; the pulpa was protruding; Malpighi's bodies were distinct.

Stomach: The mucosa of the fourth stomach was hyperaemic and of a yellowish-brown colour in patches; the omasum had dry contents.

Small intestines: The mucosa of the duodenum was oedematous and there were diffuse injections of the vessels; the mucosa of the jejunum showed red patches; the mucosa of the ileum was swollen and diffusely reddened.

Large intestines: The vessels of the caecum were injected; the colon showed a patchy hyperaemia.

Kidneys: The pelvis was oedematous and infiltrated with haemorrhages; otherwise normal; the capsule was oedematous and easily detachable.

Cause of death: Acute East Coast fever.

(b) *Lymphatic Gland Juice of Cow 596.*

NOTE.—Cow 596 contracted East Coast fever from the infestation of infected brown nymphae [*vide* Experiment III (f)].

(4) *Cow 1023.*—Purchased in the Transvaal; aged; history unknown. *Treatment.*—On the 4th May, 1910, injected subcutaneously with 5 c.c. lymphatic gland juice of cow 596.

Result.—No reaction.

NOTE.—This animal has not yet been tested on its immunity.

Summary of Results obtained from Subcutaneous Injections.

1. The subcutaneous insertion of a piece of spleen collected from an animal infected with East Coast fever was followed by an atypical reaction in the experimental heifer. This heifer proved to be immune when tested later with infected ticks.

2. The subcutaneous insertion of lymphatic glands collected from a cow infected with East Coast fever was followed by an atypical reaction in the experimental heifer. This heifer has not been tested yet for its immunity.

3. The subcutaneous injection of lymphatic gland juice obtained from an animal suffering from East Coast fever caused the death of one experimental calf on the seventeenth day. The other animal did not contract the disease, and has not yet been tested.

EXPERIMENT No. V.—INTRATHORACAL INJECTIONS.

“ A ”—SPLEEN PULP.

(a) *Spleen Pulp of Cow 594.*

NOTE.—Cow 594 contracted East Coast fever from the infestation of brown ticks [*vide* Experiment I (c)].

(1) *Heifer 836.*—Received from the Cape Colony; about one year old.

Treatment.—On the 15th December, 1909, pieces of spleen of cow 594 were inserted into the thoracal cavity of heifer 836 by means of a large trocar.

Result.—There was a slight reaction during the first three days, and again a slight reaction from the tenth to the nineteenth days, but examinations of the blood smears proved negative.

Immunity Test.—On the 10th February, 1910, heifer 836 was infested with four brown adults of heifer 677. Two of these ticks became attached. On the 3rd March, 1910, the infestation was repeated with four brown adults of heifer 592. All four became attached.

On the 24th March, 1910, a number of brown nymphae of calf 700 were infested. Two days later about seventy nymphae were found attached.

On the 2nd July, 1910, brown nymphae off cattle 923, 917, and 700 (reference numbers 268, 335, and 309) were infested. No reaction ensued in any instance.

(b) *Spleen Pulp of Cow 596.*

NOTE.—Cow 596 contracted East Coast fever from the infestation of infected brown nymphae [*vide* Experiment III (f)].

(2) *Ox 1040.*—Purchased in the Transvaal; about five years old; history unknown.

Treatment.—Injected on the 4th May, 1910, intrathoracally with 5 c.c. spleen pulp of cow 596.

Result.—Some irregular reactions ensued. The lymphatic glands were examined on two occasions and also the blood, but no positive results were obtained.

Immunity Test.—Tested on the 27th June, 1910, by the infestation of twenty brown nymphæ of cattle 923, 917, and 700 (reference numbers 269, 335, and 309).

A strong reaction ensued with the presence of *P. parvum*, and plasma bodies were present in the blood, and the animal died on the 25th July of East Coast fever.

“ B ”—INSERTION OF LYMPHATIC GLANDS.

(a) *Lymphatic Glands of Cow 594.*

NOTE.—Cow 594 contracted East Coast fever from the infestation of infected brown ticks [*vide* Experiment I (c)].

(3) *Heifer 883.*—A Cape Colony animal; about one year old.

Treatment.—On the 15th December, 1909, pieces of the lymphatic gland of cow 594 were placed into the pleural cavity of heifer 883 by means of a large trocar.

Result.—A slight irregular temperature occurred soon after the operation. The examination of the blood gave negative results.

Between the thirteenth and twenty-first days a reaction was noticed, and blood examinations made repeatedly revealed the presence of small piroplasms in scanty numbers (*P. mutans?*).

Immunity Test.—On the 10th February, 1910, this animal was tested on its immunity by the infestation of four brown adults of heifer 677. Two ticks were found fast the following day. On the 3rd March, 1910, an infestation with four brown adults of heifer 492 was made, and all four were found attached the following day.

On the 24th March, 1910, heifer 883 was infested with numbers of brown nymphæ of heifer 700, and two days later about 100 were found fast. On the 2nd July, 1910, infested with brown nymphæ off East Coast fever cattle 923, 917, and 700 (reference numbers 268, 335, and 309).

No reactions followed these infestations.

“ C ”—INJECTION OF LYMPHATIC GLAND JUICE.

Lymphatic Gland Juice of Cow 596.

NOTE.—Cow 596 contracted East Coast fever from the infestation of ticks [*vide* Experiment III (f)].

(4) *Ox 1026.*

Treatment.—Injected on the 4th May, 1910, intrathoracally with 5 c.c. lymphatic gland juice of cow 596.

Result.—No reaction.

Immunity Test.—On the 27th June, 1910, brown nymphæ off cattle 923, 917, and 700 (reference numbers 268, 335, and 309) were placed on ox 1026. A typical East Coast fever reaction followed, plasma bodies and *P. parvum* being noted in the blood. The animal was killed *in extremis* on the 26th July, 1910.

Summary of Results obtained from Intrathoracal Injections.

1. One animal which received an intrathoracal injection of pieces of spleen taken from an animal infected with East Coast fever showed a slight reaction, and, when tested later by the infestation of ticks, proved to be immune.

2. One animal which received an intrathoracal injection of spleen pulp showed an irregular reaction, and when tested with infected ticks contracted East Coast fever and died.

3. The intrathoracal insertion of lymphatic glands taken at *post-mortem* from a cow infected with East Coast fever resulted in the experimental heifer showing an irregular reaction; when tested later this heifer proved immune.

4. The injection of lymphatic gland juice of an animal infected with East Coast fever did not produce the disease. The injected animal died when subsequently tested with ticks.

EXPERIMENT No. VI.—INTRAJUGULAR INJECTIONS.

“ A ”—SPLEEN PULP.

(a) *Spleen Pulp of Cow 596.*

NOTE.—Cow 596 contracted East Coast fever from the infestation of brown nymphae [*vide* Experiment III (f)].

(1) *Ox 1042.*—Purchased in the Transvaal; aged; history unknown.

Treatment.—Injected on the 4th May, 1910, with 5 c.c. spleen pulp of cow 596.

Result.—On the eighteenth day the temperature rose to the maximum of 104° F. The examination of the blood and of the lymphatic glands proved negative.

NOTE.—This animal has not yet been tested on its immunity.

Result obtained from the Intrajugular Injection of Spleen Pulp.

The intrajugular injection of spleen pulp taken from a cow infected with East Coast fever was followed by a slight reaction in the experimental ox.

“ B ”—LYMPHATIC GLAND JUICE.

(a) *Lymphatic Gland Juice of Cow 596.*

(2) *Bull 1047.*

Treatment.—Injected intrajugularly on the 4th May, 1910, with 5 c.c. lymphatic gland juice of cow 596.

Result.—After an incubation time of sixteen days, a temperature reaction commenced, lasting until the twenty-first day. During this reaction the presence of plasma bodies was noticed as well as *P. parvum* in the blood. *P. bigeminum* was also seen. The plasma bodies and *P. parvum* were present after the temperature had subsided; from about the twenty-seventh day another reaction ensued during which *P. parvum* and *P. bigeminum* were present.

Immunity Test.—On the 27th June, 1910, this animal was infested with twenty brown nymphae off East Coast fever cattle 923, 917, and 700 (reference numbers 268, 335, and 309); on the 26th July, 1910, this infestation was repeated. No reaction followed.

(b) *Lymphatic Gland Juice of Heifer 928*

(3) *Heifer 911*.—A Cape Colony animal; about one year old.

Treatment.—Injected on the 25th May, 1910, with 10 c.c. lymphatic gland juice of heifer 928.

Result.—No reaction.

NOTE.—This animal has not yet been tested on its immunity.

(4) *Heifer 627*.—A Cape Colony animal; about one year old.

Treatment.—Injected on the 25th May, 1910, with 10 c.c. lymphatic gland juice of heifer 928.

Result.—Some irregular temperatures were noted, and on the twenty-eighth day *P. bigeminum* was present.

NOTE.—This animal has not yet been tested on its immunity.

(5) *Cow 1033*.—Purchased in the Transvaal; aged; history unknown.

Treatment.—Injected on the 25th May, 1910, with 10 c.c. lymphatic gland juice of heifer 928.

Result.—On the eighteenth day a reaction ensued during which examination of the lymphatic glands proved negative. *P. bigeminum* was found in the blood as well as a few small piroplasms.

Immunity Test.—On the 27th June this animal was tested on its immunity by the infestation of twenty brown nymphae of East Coast fever cattle 923, 917, and 700 (reference numbers 268, 335, and 309). On 26th July, 1910, this infestation was repeated. No reaction followed.

(6) *Bull 1052*.—Purchased in the Transvaal; aged; history unknown.

Treatment.—Injected on the 25th May, 1910, with 10 c.c. lymphatic gland juice of heifer 928.

Result.—An irregular reaction was noted from the twenty-eighth day after injection, and *P. bigeminum* appeared in the blood.

NOTE.—This animal has not yet been tested on its immunity.

(7) *Cow 1035*.—Purchased in the Transvaal; aged; history unknown.

Treatment.—Injected on the 25th May, 1910, intrajugularly with 10 c.c. lymphatic gland juice of heifer 928.

Result.—No reaction.

NOTE.—This animal has not yet been tested on its immunity.

(c) *Lymphatic Gland Juice of Heifer 897*.

NOTE.—Heifer 897 had been used for infusion of blood and intralymphal injection of lymphatic gland juice, but did not contract the disease. It was killed on account of East Coast fever due to the infestation of brown nymphae [*vide* Experiment III (12)].

(8) *Heifer 831*.—A Cape Colony animal; about one year old.

NOTE.—This animal had been used previously for intraperitoneal injection of spleen pulp [*vide* Experiment I (7)] and intralymphal injection of gland juice [*vide* Experiment III (10)], but did not contract East Coast fever.

Treatment.—Injected on the 3rd June, 1910, intrajugularly with 10 c.c. lymphatic gland juice of heifer 897.

Result.—No reaction.

NOTE.—This animal has not yet been tested on its immunity.

(9) *Calf 919*.—About seven months old; born at the Laboratory.

Treatment.—Injected on the 3rd June, 1910, intrajugularly with 10 c.c. lymphatic gland juice of heifer 897.

Result.—A slight reaction ensued, lasting until the nineteenth day, during which *P. bigeminum* was found.

Immunity Test.—On the 27th June, 1910, this animal was tested on its immunity by the infestation of brown nymphae off East Coast fever cattle 923, 917, and 700 (reference numbers 269, 335, and 309), and the following day the ticks were found fast. A typical reaction followed, during which agamogonous forms were found present in the lymphatic glands on the sixteenth day and *P. parvum* appeared in the blood for the first time the following day.

The animal died of East Coast fever on the thirty-first day (28th July, 1910).

(10) *Heifer* 1078.—Purchased in the Transvaal; about two years old; history unknown.

Treatment.—Injected on the 3rd June, 1910, intrajugularly with 5 c.c. lymphatic gland juice of heifer 897.

Result.—Slight reaction with *P. bigeminum* followed. Examination of the spleen and lymphatic glands gave negative results.

NOTE.—This animal died on the 20th June, but cause of death could not be ascertained.

(11) *Bull* 1071.—Purchased in the Transvaal; aged; history unknown.

Treatment.—Injected on the 3rd June, 1910, intrajugularly with 5 c.c. lymphatic gland juice of heifer 897.

Result.—No reaction.

NOTE.—This animal has not yet been tested on its immunity.

(12) *Cow* 1068.—Purchased in the Transvaal; aged; history unknown.

Treatment.—Injected on the 3rd June, 1910, intrajugularly with 5 c.c. lymphatic gland juice of heifer 897.

Result.—An irregular reaction followed, but all examinations were negative.

NOTE.—This animal has not yet been tested on its immunity.

(13) *Heifer* 1014.—A Cape Colonial animal; about one year old.

NOTE.—Had previously been used for intraperitoneal injection of blood, but did not contract East Coast fever [*vide* Experiment I (19)].

Treatment.—Injected on the 3rd June, 1910, intrajugularly with 10 c.c. lymphatic gland juice of heifer 897.

Result.—No reaction.

NOTE.—This animal has not yet been tested on its immunity.

Summary of Results obtained from the Intrajugular Injection of Lymphatic Gland Juice.

Of twelve animals which were injected intrajugularly with lymphatic gland juice obtained from an animal suffering from East Coast fever, two showed typical reaction and proved immune when tested later. Five showed slight or irregular reactions. The only one of these which has been tested as yet died of East Coast fever. The remaining five animals did not contract the disease from the injection, and have not yet been tested.

" C "—INFUSION OF BLOOD.

(a) *Blood of Heifer 928.*

NOTE.—Heifer 928, an imported English heifer, which contracted East Coast fever and showed numerous parasites in its blood at the time its blood was transfused.

(14) *Bull 1045.*—Purchased in the Transvaal; aged; history unknown.

Treatment.—Infused on the 17th May, 1910, for six minutes (corresponding to about 3 litres) of blood of heifer 928.

Result.—No reaction ensued. Examinations of the blood were frequently made, and on several occasions *P. bigeminum* was found.

NOTE.—This animal has not yet been tested on its immunity.

EXPERIMENT VII.—INTRACUTANEOUS INJECTION OF LYMPHATIC GLAND JUICE.

LYMPHATIC GLAND JUICE OF COW 596.

NOTE.—Cow 596 contracted East Coast fever from the infestation of brown nymphae [*vide* Experiment III (*f*)].

(1) *Cow 1034.*—Purchased in the Transvaal; aged; history unknown.

Treatment.—Injected on the 4th May, 1910, intracutaneously with 5 c.c. lymphatic gland juice of cow 596.

Result.—No typical reaction ensued. The lymphatic glands were examined on the eighteenth and twenty-first days, but with negative results.

NOTE.—This animal has not yet been tested on its immunity.

APPENDIX No. 1.

Statement proving the virulence of the ticks used for testing the experimental animals on their immunity.

The following ticks were used in the previous experiments:—

Reference numbers 153 (268, 335, and 309), 268, and 309.

Ticks No. 153 produced the disease in heifer 923, and the animal died on the twenty-third day from East Coast fever [*vide* Experiment I (*f*)].

Ticks Nos. 268, 335, and 309 produced the disease in calf 919, and the animal died on the thirty-first day from East Coast fever [*vide* Experiment VI (9)].

Ticks No. 268 produced the disease in heifer 596, and the animal died on the thirty-fourth day from East Coast fever [*vide* Experiment No. III (14)].

Ticks No. 309 produced the disease in calf 917, and the animal died on the fifteenth day from East Coast fever [*vide* Experiment No. III (8)].

APPENDIX NO. 2.
ANALYSIS OF RESULTS.

Number of Experiment.	Sub-head.	Material Injected or Inserted.	Number of Animal from which Material was Obtained.	EXPERIMENTAL ANIMAL.		Method of Injection or Insertion.	Result of Injection.	Result of Test on Immunity with Infected East Coast Fever Ticks.	Remarks.
				Reference No.	No. of Animal.				
I.	A.	Spleen	Calf 688	1	B.C. 569	Peritoneal ..	Killed <i>in extremis</i> on account of East Coast fever	—	—
			B.C. 569	2	B.C. 560	Peritoneal ..	Died on 4th day : Peritonitis	—	—
	B.	Pieces of spleen ..	H. 684	3	M.B. 875	Peritoneal ..	Died on 16th day : East Coast fever and peritonitis	—	—
			H. 686	4	A.B. 615	Peritoneal ..	Reaction ; not typical	Typical East Coast fever reaction ; recovered	—
			Cow 830	5	A.B. 565	Peritoneal ..	Reaction ; not typical	Atypical reaction ; recovered	—
			Cow 592	6	O. 828	Peritoneal ..	Died on 9th day : peritonitis	—	—
	C.	Spleen pulp	Cow 594	7	H. 831	Peritoneal ..	No reaction ..	—	Used later : <i>vide</i> Experiment III (10) and VI (8).
	D.	Lymphatic glands ..	H. 686	8	B.C. 458	Peritoneal ..	Atypical reaction ..	Typical East Coast fever reaction ; killed for experiments	
			Cow 830	9	A.C. 592	Peritoneal ..	Typical reaction ; died on 37th day	—	—
			Cow 592	10	Cow 679	Peritoneal ..	Doubtful East Coast fever reaction	No reaction	—

II.	E.	Lymphatic gland juice	Cow 592	11	Cow 682	Peritoneal ..	Doubtful East Coast fever reaction	Typical East Coast fever reaction; died on 21st day	—
			Cow 677	12	H. 895	Peritoneal ..	Doubtful East Coast fever reaction	No reaction ..	—
			Cow 594	13	H. 888	Peritoneal ..	Reaction; died of East Coast fever on 31st day	— ^{ad}	—
			B.C. 458	14	H. 871	Peritoneal ..	Atypical reaction ..	No reaction ..	Used for intralymphal injection previous to immunity test; <i>vide</i> Experiment III (8).
			B.C. 458	15	H. 833	Peritoneal ..	Atypical reaction ..	Not tested ..	Used later for intralymphal experiments III (9) and III (34).
			B.C. 458	16	O. 621	Peritoneal ..	No reaction ..	Reaction to intralymphal injection	Used for intralymphal injection previous to immunity test; Experiment III (5).
			B.C. 458	17	O. 661	Peritoneal ..	Irregular reaction	Died of East Coast fever [<i>vide</i> Intralymphal Experiment III (6)].	—
			H. 884	18	C. 878	Peritoneal ..	Atypical reaction (Septicaemia 21st day)	—	—
			H. 923	19	H. 1014	Peritoneal ..	No reaction ..	Not yet tested ..	—
			A.	Spleen pulp	Cow 594	1	H. 874	Intrasplenic	Reaction; died of East Coast fever on 29th day
		B.C. 458	2	O. 337	Intrasplenic	East Coast fever reaction; killed on 27th day	—		

B.C.—Bull calf. A.B.—Africander bull. H.—Heifer. M.B.—Madagascar bull. O.—Ox. C.—Calf.

ANALYSIS OF RESULTS—(continued).

Number of Experiment.	Sub-head.	Material Injected or Inserted.	Number of Animal from which Material was Obtained.	EXPERIMENTAL ANIMAL.		Method of Injection or Insertion.	Result of Injection.	Result of Test on Immunity with Infected East Coast Fever Ticks.	Remarks.
				Reference No.	No. of Animal.				
II.	A.	Spleen pulp (contd.) ..	O. 337	3	O. 620	Intrasplenic	Atypical reaction ..	No reaction	—
			O. 337	4	H. 882	Intrasplenic	Typical reaction ; died of East Coast fever on 18th day		
			O. 337	5	H. 885	Intrasplenic	Atypical reaction ; died of East Coast fever on 16th day		
			O. 337	6	H. 884	Intrasplenic	Atypical reaction ; killed on account of East Coast fever on 21st day		
	B.	Lymphatic gland juice	C. 458	7	H. 912	Intrasplenic	Died of septicaemia	—	—
	C.	Blood	H. 884	8	H. 608	Intrasplenic	Died of septicaemia	—	—
			H. 923	9	H. 1012	Intrasplenic	No reaction ..	Died of East Coast fever on 29th day	Used for intralymphal injection previous to tick infestation: Experiment III (36).
III.	A.	Spleen pulp	O. 337	1	O. 825	Intralymphal	East Coast fever reaction; died on 59th day	—	Stray ticks might have been responsible for death.
			O. 884	2	C. 879	Intralymphal	Reaction; died of East Coast fever on 18th day	—	
	B.	Lymphatic gland juice	O. 337	3	O. 826	Intralymphal	East Coast fever reaction; died on 18th day	—	—

C. 884	4	C. 880	Intralymphal	Atypical reaction ..	Reaction and died of East Coast fever on 24th day	—
C. 884	5	O. 621	Intralymphal	Reaction	No reaction ..	Previously used : Experiment I (16).
C. 884	6	O. 661	Intralymphal	East Coast fever reaction ; died on 19th day	—	Previously used : Experiment I (17).
O. 661	7	C. 905	Intralymphal	Irregular reaction	Reaction and died of East Coast fever on 33rd day	—
C. 917	8	O. 871	Intralymphal	Irregular reaction	No reaction ..	Previously used : Experiment I (14).
C. 917	9	H. 833	Intralymphal	No reaction ..	Not tested ..	Previously used : Experiment I (15) ; subsequently used : Experiment III(34).
C. 917	10	H. 831	Intralymphal	No reaction ..	Not tested ..	See Experiments I (7) and VI (8).
C. 917	11	H. 896	Intralymphal	Irregular reaction	Not tested ..	See Experiments IV (2) and III (35).
C. 917	12	H. 897	Intralymphal	No reaction ..	Reaction and killed on account of East Coast fever on 24th day	Previously used for infusion of blood.
O. 825	13	H. 1016	Intralymphal	Slight reaction ..	Not tested	—
C. 596	14	B. 1049	Intralymphal	No reaction ..	Not tested	—
C. 596	15	Cow 1032	Intralymphal	No reaction ..	Not tested	—
C. 596	16	O. 1028	Intralymphal	East Coast fever reaction ; died on 33rd day	—	—
C. 596	17	Cow 1031	Intralymphal	No reaction ..	Not tested	—
C. 596	18	Cow 1030	Intralymphal	No reaction ..	Not tested	—
C. 596	19	Cow 1029	Intralymphal	No reaction ..	Not tested	—
C. 596	20	Cow 1048	Intralymphal	Irregular reaction ..	Not tested	—
C. 596	21	O. 1038	Intralymphal	No reaction ..	Not tested	—
C. 596	22	O. 1043	Intralymphal	No reaction ..	Not tested	—

B.C.—Bull calf. A.B.—Africander bull. H.—Heifer. M.B.—Madagascar bull. O.—Ox. C.—Calf.

ANALYSIS OF RESULTS—(continued).

Number of Experiment.	Sub-head.	Material Injected or Inserted.	Number of Animal from which Material was Obtained.	EXPERIMENTAL ANIMAL.		Method of Injection or Insertion.	Result of Injection.	Result of Test on Immunity with Infected East Coast Fever Ticks.	Remarks.
				Reference No.	No. of Animal.				
III. (cont.)	B. (cont.)	Lymphatic gland juice (contd.)	C. 596	23	B. 1039	Intralymphal	No reaction ..	Not tested	—
			O. 1018	24	H. 1027	Intralymphal	Irregular reaction ..	Not tested	—
			O. 1018	25	O. 1025	Intralymphal	Irregular reaction ..	Not tested	—
			O. 1018	26	O. 1050	Intralymphal	Irregular reaction ..	Not tested	—
			O. 1018	27	B. 1051	Intralymphal	No reaction ..	Not tested	—
			O. 1018	28	O. 1046	Intralymphal	Irregular reaction ..	Not tested	—
			H. 928	29	O. 1036	Intralymphal	No reaction ..	Not tested	—
			H. 928	30	O. 1037	Intralymphal	No reaction ..	Not tested	—
			H. 928	31	O. 1041	Intralymphal	No reaction ..	Not tested	—
			H. 928	32	O. 1011	Intralymphal	Irregular reaction ..	East Coast fever reaction; killed on 21st day	—
			H. 928	33	O. 1020	Intralymphal	Irregular reaction ..	Not tested	—
			H. 897	34	H. 833	Intralymphal	No reaction ..	Not tested	See Experiments I (15) and III (9).
			H. 897	35	H. 896	Intralymphal	No reaction ..	Not tested	See Experiments IV (2) and III (11).
			H. 897	36	H. 1012	Intralymphal	Irregular reaction ..	East Coast fever reaction; died on 29th day	See Experiment II (9).
	H. 897	37	H. 1077	Intralymphal	No reaction ..	Not tested	—		
	H. 897	38	Cow 1064	Intralymphal	No reaction ..	Not tested	—		
	H. 897	39	O. 1066	Intralymphal	No reaction ..	Not tested	—		
C.	Grafting of piece of lymphatic glands	O. 337	40	H. 650	Intralymphal	Reaction; died of East Coast fever on 21st day	—	—	
		D.	Blood	H. 923	41	H. 1013	Intralymphal	No reaction ..	Died of East Coast fever on 27th day