

TABLE XVI.

The Influence of the Absence of Coitus and of Sterile and Fertile Coitus at Zero Hour on the Duration of Oestrus (in Hours).

Sow No.	LARGE BLACKS.			Sow No.	LARGE WHITES.		
	Absence of Coitus.	Sterile Coitus	Fertile Coitus.		Absence of Coitus.	Sterile Coitus.	Fertile Coitus.
44U	60	63	—	140	51	48	39
42	57	60	—	143	45	42	48
154	54	51	—	68	45	—	42
143	42	75	78	123	45	51	—
138	69	66	—	96	48	51	45
57	75	66	—	74	48	39	—
134	54	66	54	69	57	45	—
18	63	84	—	128	69	51	—
116	57	—	66	72	54	—	60
41	72	—	66	134	33	—	42
126	54	—	48	132	33	—	33
121	57	—	66	147	33	—	36
105	54	51	66	124	57	—	63
87	57	—	45	149	45	—	39
92	42	—	90	116	54	—	48
147	27	—	54	148	51	—	39
123	60	—	48	154	42	—	45
124	54	—	42	102	51	—	63
151	60	—	66	100	60	—	60
180	69	63	—	109	45	—	54
215	81	57	—	184	30	42	—
—	—	—	—	188	45	36	—
—	—	—	—	190	27	30	—

APPENDIX 6.

OBSERVATION 5.

The Optimum Service Period: Macroscopic Examination of the Ovaries and Embryos at About Twenty-six Days of Pregnancy.

This appendix is devoted to a description of the morphological appearances of the ovaries and embryos of the sow at about 26 days of pregnancy. Ten sows from each of the Large Black and Large White breeds were mated at twelve-hour intervals, starting at the zero hour of oestrus. Five such interval groups were obtained for the Large Black breed, but the sixth group in this breed includes only eight individuals, as it was not possible to obtain the full quota of ten pregnancies for the 60th hour of oestrus. In the Large White breed only four interval groups could be established.

Certain particulars, some of which are not included in the discussions below, are presented in tables of this appendix. For purposes of brevity and economy of space, the following abbreviations have been used: C. L. Gr. for Corpora Lutea Gravitatis; l.o. for left ovary and r.o. for right ovary.

Large Blacks.

(Groups 1 to 6).

Group 1. Sows Served at Zero Hour of Oestrus.

(1) *Sow No. 52.*—Oestrus on 29.12.42, 3 p.m.; duration of oestrus 63 hours; slaughtered 25.1.43; pregnancy 27 days.

C.L.Gr.: l.o. 9, r.o. 5; diameters 9—11 mm. Their general shape is spherical but some are conically inclined. Blood vessels show very distinctly over all their surfaces. The

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colour is pale purplish vinaceous. On section the cut surfaces are light flesh-coloured and no central cavities can be found; fibrous tissue now occupies their former sites. The consistency of the corpora is soft.

There is no trace of older corpora lutea.

The follicles are seashell pink in colour and faint capillaries can be seen on the bases of the largest individuals. The total number of visible follicles is 97, sizes ranging from about 5 mm. to less than 1 mm.

There are 7 and 5 apparently normal embryos in the left and right cornu respectively; their crown-rump lengths vary from 2 to 2.1 cm. One embryo in the left cornu is slightly congested in the abdominal region but is being classed as normal because of its otherwise healthy appearance.

(2) *Sow No.* 87.—Oestrus on 3.1.42, 12 noon; duration of oestrus 45 hours; slaughtered 29.1.42; pregnancy 26 days.

C.L.Gr.: l.o. 6, r.o. 7; diameters 9—10 mm. Externally the colour of the corpora is pale purplish vinaceous. Their general shape is spherical. Bloodvessels appear very distinctly on the surfaces. On section a number are seen to have central cavities of about 3 mm. diameter, each including a free grayish body, 2 to 3 mm. in size, the other cavities having been replaced by fibrous connective tissue. The left ovary has one corpus of a dark brown colour on section, the others being flesh-coloured.

Older corpora lutea are present only as orange-coloured remnants.

The largest follicles are seashell pink in colour but the smaller ones are a dull white. The total number in the two ovaries is 81; diameters range from less than 1 mm. to 5 mm.

The embryos appear to be normal, there being 3 in each side of the uterus, varying from 1.8 to 1.9 cm. in crown-rump measurement.

(3) *Sow No.* 92.—Oestrus on 16.11.42, 9 p.m.; duration of oestrus 90 hours; slaughtered 11.12.42; pregnancy 25 days.

C.L.Gr.: l.o. 4, r.o. 9; diameters 9—11 mm. The colour is a pale purplish vinaceous. Bloodvessels show clearly on their surfaces. Their consistency is soft and the general shape is spherical. On section the cut surfaces are flesh-coloured and all central cavities have disappeared.

Of the older corpora lutea 4 can be found in the left ovary only, about 2 mm. in diameter and of an ivory yellow colour.

The follicles are a seashell pink colour. Capillaries are not visible. Their total number is 95 of which a distinctly largest group (41) measure 3 to 5 mm., the rest grading down to less than 1 mm. in diameter.

The embryos are apparently all normal, there being 4 in each cornu, their crown-rump lengths being 1.5 to 1.6 cm.

(4) *Sow No.* 115.—Oestrus on 16.1.43, 9 a.m.; duration of oestrus 33 hours; slaughtered 11.2.43; pregnancy 26 days.

C.L.Gr.: l.o. 11, r.o. 1; diameters 8—10 mm. The colour of the corpora is pale purplish vinaceous. The shape is spherical and the consistency soft. Bloodvessels show profusely over all surfaces. On section the corpora are flesh-coloured and all cavities have disappeared.

In each ovary there is present one corpus luteum, very firm and solid on section and of a deep creamy yellow colour, each measuring 7 mm. in diameter. Their presence is difficult to account for. This sow never showed oestrus for a period of 134 days, i.e. from parturition to the date of service above. These two bodies would thus appear to be either persistent corpora lutea, now in regression, of the previous pregnancy or of a "silent" oestrus.

There are no signs of other older corpora lutea.

The follicles are seashell pink in colour with no capillaries on the larger ones. The total number on the two ovaries is 118; diameters range from less than 1 mm. to 4 mm.

There are 9 and 4 apparently normal embryos in the left and right cornu respectively, varying from 1.8 to 1.9 cm. in length. Migration from left to right is indicated as there is only one corpus luteum on the right ovary.

(5) *Sow No.* 121.—Oestrus on 27.1.43, 6 p.m.; duration of oestrus 48 hours; slaughtered 22.2.43; pregnancy 26 days.

C.L.Gr.: l.o. 9, r.o. 7; diameters 9—10 mm. The colour of the corpora is pale purplish vinaceous. The general shape is spherical. The consistency is soft. Bloodvessels are very plentiful. The walls of the cut surfaces are flesh-coloured and central cavities persist with a dark red blood clot in each.

Of the older corpora lutea only pale yellow remnants are present, the largest one being 2 mm. in diameter.

The follicles are seashell pink in colour. Capillaries are just visible on the largest of these bodies. On the two ovaries a total of 74 follicles can be counted; their diameters range from less than 1 mm. to 6 mm. Very few are of the 1 mm. and less class.

All embryos appear to be normal, there being 4 in the left and 5 in the right cornu, their lengths varying from 1.9 to 2 cm.

(6) *Sow No.* 123.—Oestrus on 17.12.42, 12 midnight; duration of oestrus 48 hours; slaughtered 12.1.43; pregnancy 26 days.

C.L.Gr.: l.o. 7, r.o. 10; diameters 9—10 mm. The corpora have a pale purplish vinaceous colour. Bloodvessels occur over all surfaces. The shape is spherical. The corpora are flesh-coloured on section and all cavities have disappeared.

Of the older corpora lutea only three in each ovary can be counted, ivory yellow in colour and 2 to 3 mm. in diameter.

The follicles are seashell pink in colour and no capillaries are present on the largest bodies. There are 89 on the two ovaries, their sizes ranging from 1 to 5 mm.

The left and right sides of the uterus carry 7 and 8 apparently normal embryos, all 1.7 cm. long. The left side carries in addition one atrophic embryo, 1 cm. long, very congested and much retarded in development. With only 7 corpora lutea and 8 embryos on the left side, migration seems to be indicated. One embryo in the right cornu also shows congestion in the abdominal region, but owing to its normal size and otherwise healthy condition, it is being considered as alive.

(7) *Sow No.* 124.—Oestrus on 22.1.43, 9 p.m.; duration of oestrus 42 hours; slaughtered 17.2.43; pregnancy 26 days.

C.L.Gr.: l.o. 9, r.o. 7; diameters 7—11 mm. The colour of the corpora is pale purplish vinaceous. The majority are spherically shaped but a few are conically inclined with distinct papillae, which are more highly coloured than the rest of these bodies. Bloodvessels are plentiful. The corpora are fleshcoloured on section and the central cavities have disappeared, fibrous tissue indicating their former sites.

Only creamy yellow remnants of older corpora lutea can be seen, the largest being 2 mm. in diameter.

The follicles are seashell pink in colour, capillaries showing on some of the largest. Their total number is 84, sizes ranging from below 1 to 5 mm., only a few being of the latter class.

The left and right cornua each carry 7 apparently healthy embryos, measuring 1.9 to 2 cm.

(8) *Sow No.* 128.—Oestrus on 11.1.43, 3 p.m.; duration of oestrus 45 hours; slaughtered 5.2.43; pregnancy 25 days.

C.L.Gr.: l.o. 8, r.o. 8; diameters 9—11 mm. The colour of the corpora is pale purplish vinaceous. The surfaces are strongly vascularised. The general shape is spherical. The sectioned surfaces are light flesh-coloured with no central cavities.

There are three older corpora lutea present in each ovary, 2 to 3 mm. in diameter and of deep yellow colour.

There are 90 follicles on the two ovaries, varying in size from below 1 to 5 mm. The colour is seashell pink.

The left cornu contains 2 normal and 1 atrophic embryos, the latter being 1.2 cm. long and much less developed than its mates, its compartment being also much reduced in size. In the right cornu there are 4 normal and one atrophic embryos, the latter being very blanched, almost transparent and 1.2 cm. long. All normal embryos measure 1.7 mm.

(9) *Sow No.* 147.—Oestrus on 24.11.42, 9 p.m.; duration of oestrus 54 hours; slaughtered 21.12.42, pregnancy 27 days.

C.L.Gr.: l.o. 7, r.o. 4; diameters 9—10 mm. The colour of the corpora is pale purplish vinaceous. The surfaces are strongly vascularised and the general shape is spherical. On section all cavities are seen to have disappeared.

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Of the older corpora lutea there are 6 in all, up to 3 mm. in diameter and of an ivory yellow colour. Only remnants of others are present.

The follicles are seashell pink in colour. Capillaries show on a few of the largest only. The total is 112 and their sizes range from below 1 to 4 mm., there being a larger number of the latter class than usual.

The left cornu carries only one normal and two atrophic embryos, one being 1.2 cm. long and much retarded in development with its membranes greatly reduced; the second one is already resorbed and only a gelatinous inclusion is present in the amniotic sac. Two embryos in the right cornu appear quite normal. All normal embryos measure 2 cm.

(10) *Sow No.* 151.—Oestrus on 8.2.43, 9 a.m.; duration of oestrus 66 hours; slaughtered 5.3.43; pregnancy 25 days.

C.L.Gr.: l.o. 4, r.o. 2; diameters 10—11 mm. The colour of the corpora is pale purplish vinaceous. The shape is spherical but one is conical. Bloodvessels appear in abundance. The sectioned bodies are flesh-coloured and no central cavities can be found.

Of the older corpora lutea there is a total of 11, 3 to 4 mm. in diameter and of an ivory yellow colour, one in right ovary having a small brownish inclusion.

The follicles are seashell pink in colour, especially the larger ones. Their total is 90 and their sizes range from less than 1 to 5 mm.

The left cornu contains one normal and one atrophic embryos, the latter being only 7 mm. long with appendages faintly visible; the normal embryo measures 1.7 cm. The right side carries no embryos.

Group 2. Sows Served at the 12th Hour of Oestrus.

(1) *Sow No.* 41.—Oestrus on 13.9.42, 12 midnight; served 14.9.42, 10.30 a.m.; duration of oestrus 66 hours; slaughtered 9.10.42, pregnancy 25 days.

C.L.Gr.: l.o. 6, r.o. 12; diameters 9—11 mm. The colour of the corpora lutea is pale purplish vinaceous. Vascularisation is very distinct. The conformation is spherical. The sectioned surfaces are light flesh-coloured and no cavities are present. One deep-seated corpus has a dark red blood clot inclusion.

Eleven of the older corpora lutea can be counted, 3 to 4 mm. in diameter and of a creamy yellow colour. One on the right side has a small brownish inclusion.

The largest follicles are faint seashell pink and capillaries are just visible on them. The combined total is 72 and their sizes range from less than one to 5 mm.

There are 5 and 6 apparently normal embryos in the left and right cornu respectively, measuring 1.6 to 1.7 cm. The right side carries an additional two atrophic embryos, their respective lengths being 10 and 6 mm.

(2) *Sow No.* 112.—Oestrus on 28.11.42, 6 p.m.; served 29.11.42, 4.30 a.m.; duration of oestrus 75 hours; slaughtered 24.12.42, pregnancy 25 days.

C.L.Gr.: l.o. 7, r.o. 6; diameters 9—10 mm. The colour of the corpora is pale purplish vinaceous. The general shape is spherical. The sectioned surfaces are light flesh-coloured and there are no central cavities.

Of the older corpora lutea only 3 can be found in the two ovaries, all measuring 3 mm. and of a creamy yellow colour; other show merely as whitish remnants.

The follicles total 120, ranging in size from below one to 5 mm. The colour is seashell pink and bloodvessels are visible on the larger ones.

All embryos appear to be normal, their crownrump lengths ranging from 1.8 to 1.9 cm., there being 4 in the left and 5 in the right cornu.

(3) *Sow No.* 132.—Oestrus on 13.11.42, 12 midnight; served 14.11.42, 10.30 a.m.; duration of oestrus 54 hours, slaughtered 10.12.42; pregnancy 26 days.

C.L.Gr.: l.o. 8, r.o. 6; all diameters 10 mm. The colour of the corpora is pale purplish vinaceous. The shape is spherical. Bloodvessels show clearly on all corpora. On section the central cavities can still be seen, their contents being of a dark red nature; the cut surfaces are flesh-coloured.

Of the older corpora lutea only whitish remnants, about 1 mm. in diameter, can be found.

The follicles are seashell pink in colour and faint capillaries show at the bases of the larger individuals. The two ovaries carry a total of 73 follicles, their diameters ranging from below 1 to 5 mm., only an occasional one being less than 1 mm.

Each cornu carries 6 apparently normal embryos, 1.7 to 1.8 mm. in length, sizes being small for this age. The right cornu contains an atrophic embryo also, 5 mm. in diameter, being merely an amorphous mass.

(4) *Sow No. 138.*—Oestrus on 21.10.42, 6 a.m.; served 21.10.42, 4.30 p.m.; duration of oestrus 57 hours; slaughtered 16.11.42; pregnancy 26 days.

C.L.Gr.: l.o. 8, r.o. 4; diameters 9—10 mm. The colour of the corpora is pale purplish vinaceous, and their general shape is spherical. Their surfaces are clearly vascularised. The sectioned surfaces are light flesh-coloured and all central cavities have disappeared.

Only grayish-coloured remnants of older corpora lutea can be seen.

The follicles are seashell pink in colour and faint capillaries are visible at the bases of the largest bodies. The total number is 91, their diameters ranging from less than 1 to 6 mm.

There are 4 and 8 normal embryos in the left and right side of the uterus respectively, their crown-rump lengths ranging from 1.9 to 2 cm. Migration of embryos is clearly indicated as the right ovary carries only 4 corpora lutea and the right cornu 8 embryos. Twinning is suspected on the right side where two embryos are situated 4 cm. apart, each with its own amnion but both enveloped in the same allantois; their vascular systems apparently do not anastomose.

(5) *Sow No. 154.*—Oestrus on 19.3.43, 12 noon; served 19.3.43, 10.30 p.m.; duration of oestrus 66 hours; slaughtered 14.4.43; pregnancy 26 days.

C.L.Gr.: l.o. 7, r.o. 5; diameters 9—10 mm. The colour of the corpora is pale purplish vinaceous, and the shape spherical. Bloodvessels show clearly on all corpora. The consistency is soft. The cut surfaces are flesh-coloured and there are no central cavities.

A total of 10 older corpora lutea can be counted all measuring 3 mm.; their colour is a deep creamy yellow.

The follicles have a seashell pink colour. No capillaries are visible. The total number is 76, sizes ranging from less than 1 to 5 mm.

The left cornu carries 3 and the right cornu 4 apparently normal embryos, lengths ranging from 1.7 to 1.8 cm. One almost resorbed embryo appears in the right cornu, a grayish yellow mass, measuring only 4 mm.

(6) *Sow No. 157.*—Oestrus on 27.3.43, 12 noon; served 27.3.43, 10.30 p.m.; duration of oestrus 78 hours; slaughtered 22.4.43; pregnancy 26 days.

C.L.Gr.: l.o. 9, r.o. 5; diameters 9—10 mm. The colour of the corpora is pale purplish vinaceous and the shape spherical. A clear network of bloodvessels shows on all corpora. Their consistency is medium soft. The sectioned surfaces are flesh-coloured; fibrous veins indicate the previous sites of the central cavities.

In the two ovaries a total of 19 of the older corpora lutea can be counted, all 2.5 mm. in diameter, their colour being a creamy yellow. Remnants of others are also present.

The follicles are seashell pink in colour and faint capillaries are visible on the larger bodies. The two ovaries carry 84 follicles, their diameters ranging from less than 1 to 5 mm.

The left and right side of the uterus respectively carries 5 and 4 apparently normal embryos, all crown-rump measurements being 1.8 cm. A further two atrophic embryos appear in the right cornu, one being 1.4 cm. long with a dark blood clot in the abdominal region and much retarded in development, the other is merely an amorphous mass, 4 mm. in diameter, floating in the amniotic fluid.

(7) *Sow No. 184.*—Oestrus on 7.7.43, 6 a.m.; served 7.7.43, 4.30 p.m.; duration of oestrus 51 hours; slaughtered 3.8.43; pregnancy 27 days.

C.L.Gr.: l.o. 10, r.o. 3; diameters 8—10 mm. The colour of the corpora is pale purplish vinaceous, the shape is spherical and a fine network of bloodvessels is present on all. The consistency is medium firm to touch. The sectioned bodies have a light flesh-colour and all central cavities have been closed with fibrous tissue.

Of the older corpora lutea there are 3 in each ovary, all 3 mm. in diameter and of a deep creamy yellow colour. Only scattered remnants of others are present.

The follicles are seashell pink in colour and very faint capillaries appear on the largest group. Sizes grade into each other from below 1 to 5 mm., quite one-third being of the smallest class. The total number in the two ovaries is 105.

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The left and right side of the uterus respectively contains 7 and 5 apparently normal embryos, all measuring 1.8 cm. Migration of embryos is apparent as the right side has only 3 corpora lutea and 5 embryos.

(8) *Sow No.* 191.—Oestrus on 25.5.43, 9 p.m.; served 26.5.43, 7.30 a.m.; duration of oestrus 60 hours; slaughtered 21.6.43; pregnancy 26 days.

C.L.Gr.: l.o. 9, r.o. 4; diameters 9—12 mm. The colour of the corpora is pale purplish vinaceous. The consistency is medium firm and the shape spherical. All surfaces have a clear network of bloodvessels. A light flesh colour is revealed on the sectioned surfaces and no cavities are present.

The left ovary contains 10 and the right ovary 8 older corpora lutea, of a deep creamy yellow colour, all very firm and measuring 2 to 3 mm.

The colour of the follicles is seashell pink. Faint capillaries are visible at the bases of the largest group. The total number is 72 and their diameters range from below 1 to 5 mm.

The left cornu carries 2 normal embryos, crown-rump lengths 1.9 cm., and an additional two atrophic embryos, one of only 1 cm. length, much congested and under-sized, the second one only 2 mm. long. The right side carries 4 normal embryos, 1.9 cm. long, and two atrophic bodies, each 2 mm. in diameter, and on the point of being completely resorbed.

(9) *Sow No.* 192.—Oestrus on 9.6.43, 6 p.m.; served 10.6.43, 4.30 a.m.; duration of oestrus 57 hours; slaughtered 6.7.43; pregnancy 26 days.

C.L.Gr.: l.o. 6, r.o. 9; diameters 9—10 mm. The colour of the corpora is pale purplish vinaceous, the shape is spherical and the consistency soft. All the surfaces show a clear network of bloodvessels. The sectioned surfaces have a pale flesh-colour and all cavities have been plugged with fibrous tissue.

Only 5 older corpora lutea can be found, the largest being 3 mm. The colour is a deep creamy yellow.

The follicles are seashell pink in colour and no capillaries are visible. Sizes grade imperceptibly from 1 to 5 mm. The total number is 98.

The embryos are apparently all normal, there being 5 in the left and 6 in the right cornu, their lengths ranging from 1.8 to 1.9 cm.

(10) *Sow No.* 127.—Oestrus on 19.9.43, 3 a.m.; served 19.9.43, 1.30 p.m.; duration of oestrus 51 hours; slaughtered 15.10.43; pregnancy 26 days.

C.L.Gr.: l.o. 6, r.o. 9; diameters 8—11 mm. The colour of the corpora is pale purplish vinaceous, the shape is spherical and vascularisation is very distinct. On a few corpora rupture points still show a raised papillae. The consistency is fairly firm to touch. The cut surfaces have a flesh-colour and the central cavities have been plugged with fibrous tissue.

Older corpora lutea are present only as small remnants, some measuring up to 3 mm. The colour is light to ivory yellow.

The majority of follicles are 3 to 4 mm. in diameter, the range being 1 to 5 mm. Their colour is seashell pink. Capillaries are visible only on the largest group. The total is 134.

The left cornu carries 4 apparently normal embryos, 1.7 to 1.8 cm. long, and one atrophic embryo, much resorbed and reduced to an amorphous mass of 2 mm. diameter, the shrunken membranes being contained in a reduced compartment of the cornu. The right side contains 4 embryos, 1.7 to 1.8 cm. long, and a fifth one, classed as atrophic because of its very congested condition and its general under-development, its length being 1.4 cm.

Group 3. Sows Served at the 24th Hour of Oestrus.

(1) *Sow No.* 45u.—Oestrus on 27.5.41, 9 p.m.; served 28.5.41, 7.30 p.m.; duration of oestrus 42 hours; slaughtered 23.6.41; pregnancy 26 days.

C.L.Gr.: l.o. 14, r.o. 4; diameters 7—10 mm. The colour of the corpora is pale purplish vinaceous, their shape is spherical and a clear network of bloodvessels is evident on all surfaces. Their consistency is flabby to touch. On section the cut surfaces are pale flesh-coloured and central cavities still persist in a limited number of instances.

Of the older corpora lutea one exceptionally large one is present in the left ovary with a diameter of 6 mm., of a bright yellow colour. Others show as brownish-yellow bodies of up to 3 mm. in size; it is difficult to determine their correct number.

The follicles are seashell pink in colour for the largest group to an opaque white for the smaller classes. Capillaries are visible on the largest follicles. Their total number is 107, diameters ranging from less than 1 to 4 mm.

All the embryos appear to be normal, there being 3 and 4 in the left and right cornu respectively, their lengths varying from 1.9 to 2 cm.

(2) *Sow No.* 49.—Oestrus on 5.6.41, 9 p.m.; served 6.6.41, 7.30 p.m.; duration of oestrus 57 hours; slaughtered 2.7.41; pregnancy 26 days.

C.L.Gr.: l.o. 10, r.o. 5; diameters 9—10 mm. The colour of the corpora is pale purplish vinaceous. The consistency is soft and the shape spherical. A number still show the points of rupture as small areas of scar tissue. All corpora have a clear network of bloodvessels. On section, central cavities are found still to persist on a few corpora, on others they have disappeared.

Of the older corpora lutea only one can be found, 3 mm. in diameter, others showing merely as scattered remnants.

The follicles are seashell pink. Capillaries are visible on the largest group. The two ovaries carry a total of 75 follicles, sizes ranging from less than 1 to 5 mm.

There is only one embryo in each cornu, both atrophic. The one in the left cornu is 1.6 cm. long, definitely under-developed for age, with bloodvessels much congested. The embryo in the right cornu measures only 8 mm. and is merely a whitish amorphous mass in resorption.

(3) *Sow No.* 55.—Oestrus on 28.3.41, 12 noon; served 29.3.41, 10.30 a.m.; duration of oestrus 69 hours; slaughtered 23.4.41; pregnancy 25 days.

C.L.Gr.: l.o. 7, r.o. 4; diameters 9—10 mm. The colour of the corpora is pale purplish vinaceous. Bloodvessels are very obvious on all the surfaces. Flesh-coloured on section and central cavities present. The shape is spherical and the consistency soft. The majority show the points of rupture as small papillae.

The older corpora lutea are present merely as small scattered remnants, yellowish to white in colour.

The largest follicles are seashell pink in colour and the smallest groups are an opaque white. The total for the two ovaries is 85 and their diameters range from less than 1 to 5 mm.

The left and right side of the uterus carries 3 and 7 apparently normal embryos respectively. With only 4 corpora lutea on the right side, migration of embryos is apparent. (Sizes of embryos were unfortunately not recorded).

(4) *Sow No.* 94.—Oestrus on 10.1.42, 12 noon; served 11.1.42, 10.30 a.m.; duration of oestrus 66 hours; slaughtered 6.2.42; pregnancy 25 days.

C.L.Gr.: l.o. 7, r.o. 7; diameters 8—10 mm. The colour of the corpora is pale purplish vinaceous. The shape is spherical. All corpora have a clear network of bloodvessels. On section every corpora has a small central cavity with no fluid inclusions; the cut surfaces being pale flesh-coloured.

Older corpora lutea are present as small remnants, only one measuring 3 mm., their colour varying from light yellow to almost white.

The follicles are seashell pink in colour. A few of the largest ones have faint capillaries. The total for the two ovaries is 89, ranging in size from 1 to 5 mm.

The left and right cornu carries 1 and 5 apparently normal embryos respectively, their lengths varying from 1.9 to 2 cm. The left side carries an atrophic embryo also, almost completely resorbed and showing as a whitish amorphous mass, 5 mm. in diameter.

(5) *Sow No.* 110.—Oestrus on 10.11.42, 6 p.m.; served 11.11.42, 4.30 p.m.; duration of oestrus 72 hours; slaughtered 7.12.42; pregnancy 26 days.

C.L.Gr.: l.o. 3, r.o. 11; diameters 7—10 mm. The colour of the corpora is pale purplish vinaceous. The shape is spherical; bloodvessels appear on all the surfaces. The sectioned surfaces are light flesh-coloured and there are no central cavities.

There is no trace of older corpora lutea.

The follicles are seashell pink in colour. Faint capillaries are visible on the largest group. The total number on the two ovaries is 73, diameters ranging from 1 to 6 mm., there being remarkably few of the smallest class.

The left and right cornu carries 3 and 5 normal embryos respectively, all measuring 2 cm. An obviously atrophic embryo in the left cornu is 1.5 cm. long, much undersized for age and has dark congested areas over its body.

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(6) *Sow No.* 131.—Oestrus on 12.1.43, 9 p.m.; served 13.1.43, 7.30 p.m.; duration of oestrus 78 hours; slaughtered 8.2.43; pregnancy 26 days.

C.L.Gr.: l.o. 7, r.o. 7; diameters 10—11 mm. The colour of the corpora is pale purplish vinaceous. The shape is spherical and the consistency soft. On section they are light flesh-coloured with no central cavities.

Older corpora lutea have all disappeared except for a few scattered light yellow spots.

The follicles have a seashell pink colour. Capillaries show at the bases of the few largest ones only. The total on the two ovaries is 88, their sizes ranging from less than 1 to 6 mm.

There are 7 and 6 apparently normal embryos in the left and right cornu respectively, all being 1.9 cm. long.

(7) *Sow No.* 136.—Oestrus on 17.1.43, 9 p.m.; served 18.1.43, 7.30 p.m.; duration of oestrus 93 hours; slaughtered 15.2.43; pregnancy 28 days.

C.L.Gr.: l.o. 9, r.o. 4; diameters 9—11 mm. The colour of the corpora lutea is pale purplish vinaceous. All are spherically shaped and soft to the touch. On section, only one contains a central cavity with a small blood clot inclusion; the cut surfaces being light flesh-coloured. Bloodvessels show prominently on all the external surfaces.

Previous corpora lutea have all disappeared except for one ochre-coloured body in the left ovary of 2 mm. diameter.

The follicles are seashell pink with no bloodvessels in evidence. There are 139 follicles in all, measuring from below 1 to 5 mm.

The left side carries 8 and the right 4 apparently normal embryos, ranging from 2.1 to 2.3 cm. in length. One embryo in the left cornu was accepted as atrophic because of its greatly retarded development generally, its length being 1.8 cm.; 100 per cent. of the ova were fertilized.

(8) *Sow No.* 144.—Oestrus on 17.10.42, 9 a.m.; served 18.10.42, 7.30 a.m.; duration of oestrus 66 hours; slaughtered 13.11.42; pregnancy 26 days.

C.L.Gr.: l.o. 7, r.o. 3; all diameters 10 mm. Bloodvessels are very prominent. The shape is spherical. On section there are no cavities and the cut surfaces are flesh-coloured. Externally the colour is pale purplish vinaceous.

Older corpora lutea are found only in the left ovary, up to 2 mm. in diameter and of a yellowish colour.

The follicles number 91 in all, measuring 1 to 5 mm. The colour is seashell pink.

The embryos are apparently all normal, each one being 2 cm. long. There are one on the left and 3 on the right side.

(9) *Sow No.* 148.—Oestrus on 7.11.42, 9 p.m.; served 8.11.42, 7.30 p.m.; duration of oestrus 75 hours; slaughtered 4.12.42; pregnancy 26 days.

C.L.Gr.: l.o. 6, r.o. 5; all diameters 10 mm. There is a clear network of bloodvessels on all corpora. They are light flesh-coloured on section with no cavities; one in the right ovary has a pale yellow inclusion of 2 mm. diameter. The external colour is pale purplish vinaceous.

Of the older corpora lutea there is a total of 7, all being 3 mm. in diameter and yellow-coloured. Small yellowish remains of others are also present.

Of the follicles there are only a few of below 1 mm., the largest ones showing bright-coloured capillaries, spread over the surfaces. The colour of the follicles is seashell pink. The total number is 75, measuring from below 1 to 5 mm.

The left cornu carries 5 normal embryos, 1.8 to 1.9 cm. long. The right cornu contains only one normal embryo, 1.8 cm. long and 2 strophic bodies, one of which is only 1.4 cm. long enclosed in a very reduced membrane, the general development of which is greatly retarded; the second one being merely a whitish amorphous mass, 5 mm. in diameter.

(10) *Sow No.* 187.—Oestrus on 24.5.43, 3 p.m.; served 25.5.43, 1.30 p.m.; duration of oestrus 54 hours; slaughtered 19.6.43; pregnancy 25 days.

C.L.Gr.: l.o. 6, r.o. 7; diameters 9—10 mm. The corpora are pale purplish vinaceous in colour. There is a clear network of bloodvessels. The shape is spherical to conical and the consistency fairly firm to the touch. All cavities have been closed with fibrous plugs. The cut surfaces are pale flesh-coloured.

Older corpora lutea: there are 6 in the left and 7 in the right ovary, about 3 mm. in diameter and of a deep creamy yellow colour.

The follicles are seashell pink to an opaque white in colour. Bloodvessels appear on a few large ones only. The total number is 100 measuring from below 1 to 5 mm.

There are 3 normal embryos on each side, all measuring 1.9 cm. Two atrophic embryos appear in the left cornu, of which one is only 1.1 cm. long and much underdeveloped generally, the other one having been completely reabsorbed with only the foetal membranes remaining.

Group 4. Sows Served at the 36th Hour of Oestrus.

(1) *Sow No. 45.*—Oestrus on 22.9.42, 12 midnight; served on 24.9.42, 10.30 a.m.; duration of oestrus 75 hours; slaughtered 20.10.42; pregnancy 26 days.

C.L.Gr.: l.o. 10, r.o. 1; diameters 9—10 mm. The colour of the corpora is pale purplish vinaceous. The one corpus in the right ovary is deeply bedded and shows as a dark red structure. On section this body contains a dark red blood clot of 6 mm. diameter. The corpora in the left ovary are spherical with bloodvessels in profusion. All cut surfaces are pale flesh-coloured.

Previous corpora lutea show only as light-coloured specks of matter.

The follicles are a seashell pink with bloodvessels at the bases of the largest ones only. The total number is 104 measuring from below 1 to 5 mm. in diameter.

The embryos in the left cornu, considered as normal, total 6, varying from 1.6 to 2.0 cm. in length. Although the size of the smaller ones is exceptional, there is nothing to suggest atrophic conditions from their general appearance. A seventh one is definitely atrophic, having no appendages and measuring only 1.3 cm. The 4 embryos in the right cornu all appear to be normal, measuring 1.9 to 2.0 cm. Migration from left to right is indicated as only one corpus is present in the right ovary.

(2) *Sow No. 57.*—Oestrus on 4.11.42, 9 a.m.; served 5.11.42, 7.30 p.m.; duration of oestrus 69 hours; slaughtered 1.12.42; pregnancy 26 days.

C.L.Gr.: l.o. 7, r.o. 9; diameters 9—11 mm. The colour of the corpora is pale purplish vinaceous, the shape is spherical to conical and bloodvessels stand out clearly. On section they are flesh-coloured, all cavities having disappeared.

Only 3 older corpora lutea appear in the two ovaries and measure about 3 mm. The colour is deep yellow.

The larger follicles are seashell pink in colour with capillaries at their bases. Their total number is 58, measuring from less than 1 to 5 mm. in diameter, there being remarkably few of the smaller sizes.

The left cornu carries 5 and the right 6 embryos, each being 2 cm. long and apparently all normal.

(3) *Sow No. 60.*—Oestrus on 6.5.41, 12 midnight; served 8.5.41, 10.30 a.m.; duration of oestrus 60 hours; slaughtered 3.6.41; pregnancy 26 days.

C.L.Gr.: l.o. 8, r.o. 5; diameters 9—11 mm. The corpora are pale purplish vinaceous, all having the usual network of bloodvessels. The consistency is soft and the shape spherical to conical. Light flesh-coloured on section without any cavities.

A few of the older corpora lutea have diameters of up to 3 mm., the colour being deep yellow, the majority are present as remnants.

The follicles are seashell pink in colour, there being 108 in all, measuring from less than 1 to 5 mm.

The right cornu carries 6 normal embryos, from 2.0 to 2.1 cm. in length. The left cornu carries 5 normal embryos of similar sizes but one of only 1.6 cm., but as there is nothing unusual about this embryo otherwise, it is accepted as being normal.

(4) *Sow No. 99.*—Oestrus on 1.1.42, 9 a.m.; served 2.1.42, 7.30 p.m.; duration of oestrus 69 hours; slaughtered 28.1.41; pregnancy 26 days.

C.L.Gr.: l.o. 8, r.o. 4; diameters 9—10 mm. The corpora lutea are spherically shaped with a distinct network of bloodvessels; flesh-coloured on section with no cavities showing. The external colour is pale purplish vinaceous.

A number of older corpora lutea are clearly visible, measuring up to 3 mm. and of a creamy yellow colour.

The follicles are a light seashell pinkish colour; the total number is 70, which measure 1 to 6 mm.

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One embryo in the left and 2 in the right cornu appear normal and measure 1.7 to 1.8 mm. The left cornu has three areas which, from macroscopic appearances, must have carried resorbed embryos, there being also present distinct whitish membranes several cm. in length; these areas were therefore taken to represent atrophic embryos.

(5) *Sow No.* 100.—Oestrus on 12.1.42, 3 a.m.; served 13.1.42, 1.30 p.m.; duration of oestrus 54 hours; slaughtered 9.2.42; pregnancy 27 days.

C.L.Gr.: l.o. 8, r.o. 4; diameters 7—14 mm. One corpus measures 7 mm., a second one 14 mm., and the balance are 9 to 10 mm. Their colour is pale purplish vinaceous. The network of bloodvessels is very clear. The shape is spherical and the central cavities have almost completely disappeared.

Older corpora lutea are of a light yellow colour, the largest ones measuring up to 3 mm. in diameter.

The follicles are seashell pink in colour, there being 88 in all with diameters of 1 to 5 mm.

The left cornu carries only one normal embryo, 2.3 cm. long and the right cornu 3 normal embryos 2.0 mm. long. In addition the right cornu contains the remains of a resorbed embryo of which only the loose membranes are in evidence.

(6) *Sow No.* 108.—Oestrus on 29.11.42, 3 a.m.; served 30.11.42, 1.30 p.m.; duration of oestrus 75 hours; slaughtered 28.12.42; pregnancy 28 days.

C.L.Gr.: l.o. 6, r.o. 9; diameters 10—11 mm. The colour of the corpora is pale purplish vinaceous. Bloodvessels are plentiful and the shape is spherical. On section the walls are light flesh-coloured and the cavities are all healed up.

Of the older corpora lutea, 11 can be counted, reddish brown in colour and measuring 2 to 3 mm.

The follicles are seashell pink coloured with capillaries at the bases of the largest ones. The total number is 71 and their diameters vary from 1 to 5 mm., only an occasional one being of the 1 mm. class.

The left cornu carries 5 and the right 7 embryos, all 2.2 cm. long, there being no signs of abnormalities.

(7) *Sow No.* 111.—Oestrus on 5.12.42, 9 a.m.; served 6.12.42, 7.30 p.m.; duration of oestrus 69 hours; slaughtered 31.12.42; pregnancy 25 days.

C.L.Gr.: l.o. 9, r.o. 7; diameters 10—12 mm. The Corpora have a pale purplish vinaceous colour. Their shape is spherical and there are plenty of bloodvessels over the surfaces. On section the cut surfaces are light flesh-coloured, all cavities having disappeared.

Of the older corpora lutea there are 5 in all, of a deep yellow colour; diameters are 2 to 3 mm.

The follicles have a seashell pink colour. Capillaries appear on the largest ones. The total number is 93 and they measure 1 to 5 mm., very few being below 2 mm.

The left cornu carries 5 and the right 4 embryos, varying from 1.6 to 1.8 mm. in length, all being apparently normal.

(8) *Sow No.* 116.—Oestrus on 27.11.42, 6 a.m.; served 28.11.42, 4.30 p.m.; duration of oestrus 84 hours; slaughtered 23.12.42; pregnancy 25 days.

C.L.Gr.: l.o. 7, r.o. 6; diameters 9—11 mm. The corpora have a pale purplish vinaceous colour. The shape is spherical. Bloodvessels are plentiful. They are light flesh-coloured on section and all cavities have been filled by fibrous tissue.

No previous corpora lutea can be found.

The largest follicles are distinctly seashell pink in colour with fine capillaries over their surfaces. The total number is 116 and their diameters vary from less than 1 to 5 mm., a fair percentage being of the 1 mm. and less class.

The left cornu carries 5 and the right 6 embryos, all of which measure 1.7 mm. The right side contains a distinctly atrophic embryo which shows much congestion in its body in addition to being greatly under-developed; the length is 1.1 cm.

(9) *Sow No.* 118.—Oestrus on 13.12.42, 3 a.m.; served 14.12.42, 1.30 p.m.; duration of oestrus 54 hours; slaughtered 9.1.43; pregnancy 26 days.

C.L.Gr.: l.o. 8, r.o. 4; diameters 9—10 mm. The corpora have a pale purplish vinaceous colour. Blood vessels are plentiful. A number still show the points of rupture as smooth raised areas. On section all cavities are seen to have disappeared.

Older corpora lutea cannot be found.

The follicles are of a seashell pink colour. No capillaries are evident on any of these bodies. The total number is 61 and they measure from below 1 to 6 mm., only a few being in the 1 mm. and less class.

The left cornu carries 4 normal embryos, crown-rump lengths 1·8—1·9 cm. There is also one atrophic embryo of 1·2 cm. length and of a dark red colour, its compartment in the canal being much reduced in size. A second atrophic embryo is also present on the same side and is merely a formless whitish mass, 0·7 cm. in diameter. The right cornu contains 4 normal embryos which measure 1·8 to 1·9 cm. and also one atrophic body, sized 2 x 4 mm., showing as an amorphous whitish mass.

(10) *Sow No.* 145.—Oestrus on 4.11.42, 9 p.m.; served 6.11.42, 7.30 a.m.; duration of oestrus 84 hours; slaughtered 2.12.42; pregnancy 26 days.

C.L.Gr.: l.o. 6, r.o. 4; all diameters 10 mm. The colour of the corpora is pale purplish vinaceous. Bloodvessels are clearly in evidence. The shape is spherical. On section all cavities are found closed with fibrous tissue.

Of the older corpora lutea 7 and 9 can be counted in the left and right ovary respectively, all diameters being 3 mm. and the colour distinctly creamy yellow.

The follicles are of a light seashell pink colour while some are almost colourless. Bloodvessels appear at the bases of the largest group. There are 110 in all, their diameters being from below 1 to 5 mm.

There are 2 and 1 normal embryos in the left and right cornu respectively, all being 2 cm. long. In the right cornu there is evidence of a suspected case of atrophy owing to an enlargement of a section of the cornu but as no embryonic remains are present atrophy was discounted.

Group 5. Sows Served at 48th Hour of Oestrus.

(1) *Sow No.* 34.—Oestrus on 4.10.42, 6 p.m.; served 6.10.42, 4.30 p.m.; duration of oestrus 72 hours; slaughtered 2.11.42; pregnancy 27 days.

C.L.Gr.: l.o. 15, r.o. 3; diameters 9—10 mm. The corpora have a pale purplish vinaceous colour. Bloodvessels show clearly over all surfaces. The general shape is spherical. The cut surfaces are light flesh-coloured and central cavities are still present in some only.

Only a few older corpora are present in each ovary, of a distinctly creamy yellow colour, measuring up to 2 mm.

The follicles are of a seashell pink colour, faint capillaries being just visible on the largest ones. The total number is 139 and their diameters range from less than 1 mm. to 5 mm.

The left cornu carries 6 and the right 3 normal embryos which measure 2·1 to 2·2 cm. in length. The right cornu has an allantoic sac with a diameter of 6 mm. but no remains of an embryo are present; this condition is recorded as a case of atrophy.

(2) *Sow No.* 50.—Oestrus on 9.6.41, 6 p.m.; served 11.6.41, 4.30 p.m.; duration of oestrus 66 hours; slaughtered 7.7.41; pregnancy 26 days.

C.L.Gr.: l.o. 5, r.o. 10; diameters 6—11 mm. Only one corpus is 6 mm. in diameter, the rest are 9 to 11 mm. The corpora have a pale purplish vinaceous colour. The shape is spherical. A clear network of bloodvessels appears on all. The consistency is soft. Those in the left ovary nearly all contain small cavities and 4 have large cavities containing a clear fluid. Cavities are non-existent in the corpora of the right ovary.

Of the older corpora lutea a few measure 4 mm. but the majority are 2 mm. and less in diameter; their colour is creamy yellow.

The follicles are seashell pink in colour. Capillaries are present on a few of the largest ones. The total number is 112 and their diameters range from less than 1 to 6 mm.

The left cornu carries 4 embryos measuring 1·8 to 2·0 cm., apparently all normal. The right cornu carries 2 embryos, one measuring 2·1, the other 1·7 cm.; as the latter shows no signs of degeneration it was considered as normal. A third embryo on this side is completely degenerate, being only 7 mm. in length.

(3) *Sow No.* 125.—Oestrus on 4.8.42, 6 p.m.; served 6.8.42, 4.30 p.m.; duration of oestrus 60 hours; slaughtered 1.9.42; pregnancy 26 days.

C.L.Gr.: l.o. 5, r.o. 7; diameters 9—12 mm. The corpora lutea have a pale purplish vinaceous colour. The shape is spherical and there is a clear network of bloodvessels. One corpus in each ovary is of a rather bright red colour. On section the majority are solid but a few show vestiges of central cavities.

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Of the previous corpora lutea a total of 9 are present, deep yellow in colour and all just under 4 mm.

The larger follicles are a seashell pink and no capillaries can be seen on their surfaces. The total number is 77 with diameters of from below 1 mm. to 4 mm.

The left cornu carries 4 and the right 6 normal embryos, measuring 2 to 2.1 cm. in length; the left also contains one resorbed embryo of which only the membranes are present.

(4) *Sow No. 129.*—Oestrus 9.1.43, 12 midnight; served 11.1.43, 10.30 p.m.; duration of oestrus 75 hours; slaughtered 5.2.43; pregnancy 25 days.

C.L.Gr.: l.o. 7, r.o. 3; diameters 9—10 mm. The corpora lutea have a pale purplish vinaceous colour. Bloodvessels appear over all surfaces. The consistency is soft and the shape is spherical. On section the cut surfaces are light flesh-coloured and there are no central cavities. One corpus contains a small whitish body of 2 mm. diameter.

Of the previous corpora lutea nothing but pale yellow remains can be seen.

Of the follicles there is a total of 83 and their diameters range from less than 1 to 4 mm. No capillaries are evident. The colour is pinkish.

The left cornu contains 3 normal embryos, 1.9 to 2.0 cm. in length as well as two atrophic embryos; one measures only 8 mm. with merely the outline showing distinctly, the other is 1.2 cm. long with a very dark red congestive state in the abdominal region and the bloodvessels of the membranes. The right side has 3 normal embryos, all measuring 2 cm.

(5) *Sow No. 130.*—Oestrus on 27.8.42, 3 p.m.; served 29.8.42, 1.30 p.m.; duration of oestrus 69 hours; slaughtered 25.9.42; pregnancy 27 days.

C.L.Gr.: l.o. 1, r.o. 9; diameters 10—11 mm. The corpora lutea have a pale purplish vinaceous colour. Bloodvessels are clearly in evidence. The shape is spherical. On section the cut surfaces have a light flesh colour and no central cavities are present.

Of the previous corpora lutea only 2 are present with diameters of about 2 mm.

The largest follicles are seashell pink coloured, a few are faintly vascular. The total number is 99 and their diameters vary from below 1 mm. to 6 mm., the smallest ones being just visible as pin points.

There are 5 embryos in the left and 4 in the right cornu, measuring 2.1 cm. in length; migration is apparent as there is only one corpus in the left ovary.

(6) *Sow No. 134.*—Oestrus on 4.3.43, 9 p.m.; served 6.3.43; 7.30 p.m.; duration of oestrus 63 hours; slaughtered 1.4.43; pregnancy 26 days.

C.L.Gr.: l.o. 6, r.o. 8; diameters 9—11 mm. The Corpora have a very light purplish vinaceous colour. Bloodvessels show very distinctly over all surfaces. The shape is spherical. The cut surfaces are light flesh-coloured and all central cavities have disappeared.

The older corpora lutea have completely disappeared.

The follicles are seashell pink in colour and faint capillaries appear on the largest ones. There are 79 follicles in all, their diameters varying from less than 1 mm. to 5 mm., with only a few of the 1 mm. class. A largest group of 26 is distinctly demarcated from the rest of the population.

Of the embryos there are 6 in each cornu, all just on 2 cm. in length. One embryo in the left and 2 in the right cornu show a dark congestion in the abdominal region, but as they are similar to the others in all other respects, they are considered as normal.

(7) *Sow No. 153.*—Oestrus on 28.2.43, 3 p.m.; served 2.3.43, 1.30 p.m.; duration of oestrus 69 hours; slaughtered 29.3.43; pregnancy 27 days.

C.L.Gr.: l.o. 7, r.o. 6; diameters 9—10 mm. The corpora lutea are mostly spherically shaped with many bloodvessels on the surfaces. On section they are light flesh-coloured and the majority contain a brownish inclusion in the cavities, the latter being 2 mm. in diameter.

Of the older corpora lutea a total of 10 can be found, 2 mm. in diameter and all of a creamy yellow colour.

The follicles are seashell pink in colour, the largest ones showing faint capillaries. The total number is 87, ranging from 1 mm. to 6 mm. in size, only a few being of the smaller class.

The left cornu carries 6 normal embryos, 2 cm. long, and an amorphous mass in the embryonic sac, 5 mm. in diameter. Two of the 6 are rather congested in the abdominal area, but as their sizes are similar to the others, they are being considered as normal. The

right cornu contains 6 embryos of which 5 are 2 cm and one 1·8 cm. long, the latter shows slight congestion in the abdominal region, but being apparently quite normal otherwise, it is being considered as normal with the others. Hundred per cent. of the ova have been fertilized.

(8) *Sow No.* 161.—Oestrus on 23.4.43, 9 a.m.; served 25.4.43, 7.30 a.m.; duration of oestrus 87 hours; slaughtered 19.5.43; pregnancy 24 days.

C.L.Gr.: l.o. 10, r.o. 5; diameters 9—10 mm. The majority are spherical, some being conically inclined. Bloodvessels on the surfaces are fairly prominent. On section they are light flesh-coloured, all cavities being filled in with connective tissue. The external colour is pale purplish vinaceous.

Of the previous corpora lutea only 3 can be found, 3 mm. in diameter, the rest showing as small spots, all being creamy yellow in colour.

The follicles are mostly seashell pink in colour and capillaries appear on the largest ones. The total number is 111, sizes merging imperceptibly into each other from below 1 to 5 mm.

The left cornu carries 7 normal embryos and the right 5, measuring 1·7 mm. The right side contains one embryo which is considered as atrophic, because it measures only 1·2 cm. and because it is much under-developed generally; the bloodvessels in its membranes also show congestion.

(9) *Sow No.* 178.—Oestrus on 15.6.43, 9 a.m.; served 17.6.43, 7.30 a.m.; duration of oestrus 78 hours; slaughtered 13.7.43; pregnancy 26 days.

C.L.Gr.: l.o. 9, r.o. 5; diameters 9—10 mm. A clear network of bloodvessels appear on all corpora. The shape is spherical and the consistency soft. The cut surfaces are light flesh-coloured and all central cavities have disappeared. The external colour is pale purplish vinaceous.

Of the older corpora lutea there is a total of 9, the diameters are about 3 mm. and the colour deep yellow. Scattered remains of others are also present.

The largest follicles are seashell pink in colour and capillaries show clearly on the largest group. Sizes merge into each other from 1 to 5 mm. The total number is 87.

The left cornu contains 2 normal embryos and one atrophic embryo. The previous existence of the latter is only evident by the remains of the membranes. The right side carries 3 normal bodies and one amorphous mass, 6 mm. in diameter. The normal embryos measure 1·7 to 1·9 cm.

(10) *Sow No.* 156.—Oestrus on 6.4.43, 9 a.m.; served 8.4.43, 7.30 a.m.; duration of oestrus 72 hours; slaughtered 4.5.43; pregnancy 26 days.

C.L.Gr.: l.o. 5, r.o. 6; diameters 10—11 mm. The corpora lutea have a pale purplish vinaceous colour. The shape is spherical and bloodvessels are present on all of them. The cut surfaces are pale flesh-coloured and all cavities have been closed in with fibrous tissue.

Of the older corpora lutea there are 9 in the two ovaries, their diameters are 3 mm. and their colour creamy yellow.

The follicles are a seashell pink. Faint capillaries appear on the largest group. The total number is 86 and their sizes vary from 1 to 5 mm.

One normal embryo appears only in the left cornu; its length is 2·1 cm. This side carries, in addition, 2 resorbed embryos of which only the membranes are present. The right cornu carries 3 atrophic embryos, 2 showing as whitish amorphous masses of about 5 mm. length and of the third only the membranes are in evidence.

Group 6. Sows Served at the 60th Hour of Oestrus, or During Metoestrus.

(1) *Sow No.* 160.—Oestrus on 7.3.43, 6 p.m.; served 10.3.43, 4.30 a.m.; duration of oestrus 72 hours; slaughtered 5.4.43; pregnancy 26 days.

C.L.Gr.: l.o. 3, r.o. 8; diameters 9—10 mm. The corpora lutea have a pale purplish vinaceous colour. The shape is spherical. Vascularisation is very distinct. The cut surfaces are light flesh-coloured and all cavities are closed up with connective tissue.

A total of 8 older corpora lutea are present, 3 mm. in diameter and of a creamy yellow colour.

The follicles are an opaque white to seashell pink in colour. No capillaries are visible. Total number is 68, the smallest group being below 1 mm. and the largest 5 mm.

The left cornu contains 4 and the right 5 normal embryos, all 2 mm. long.

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(2) *Sow No.* 164.—Oestrus on 23.5.43, 9 p.m.; served 26.5.43, 7.30 a.m.; duration of oestrus 66 hours; slaughtered 21.6.43; pregnancy 26 days.

C.L.Gr.: l.o. 8, r.o. 2; diameters 9—10 mm. The colour of the corpora lutea is pale purplish vinaceous. A clear network of bloodvessels is present on all surfaces. The shape is spherical. On section all cavities are seen to have disappeared and the cut surfaces are a light flesh colour.

Only scattered remains of older corpora lutea can be found on sectioning the corpora.

The follicles are a light seashell pink with bloodvessels on the largest group only. The total number is 110, and their diameters range from below 1 mm. to 5 mm., only a few being of the 1 mm. class.

The left cornu carries only one embryo, which is classed as atrophic, being only 1.5 cm. long with all appendages poorly developed as well as the gravid section of the cornu. The right side carries 1 normal embryo, 2.0 cm. long as well as an atrophic embryo, very similar to that on the left side but in addition it is badly congested in the abdominal region.

(3) *Sow No.* 170.—Oestrus on 6.4.43, 6 p.m.; served 9.4.43; 4.30 a.m.; duration of oestrus 87 hours; slaughtered 5.5.43; pregnancy 26 days.

C.L.Gr.: l.o. 6, r.o. 8; diameters 9—10 mm. The corpora lutea have a pale purplish vinaceous colour. The shape is spherical and the consistency soft. Bloodvessels are clearly visible on some but only faintly so on the majority. Central cavities have been plugged with fibrous tissue and the cut surfaces are pale flesh-coloured.

A total of 3 older corpora lutea can be found in the right ovary only with diameters of 3 mm., their colour is creamy yellow; others show as brownish remains only.

The follicles have a faint pinkish colour; the total is 161, their sizes ranging from below 1 mm. to 5 mm.

The left cornu carries 6 and the right 7 normal embryos, all of which are normal in appearance; they are 2 to 2.1 cm. long.

(4) *Sow No.* 179.—Oestrus on 24.5.43, 9 p.m.; served 27.5.43, 7.30 a.m.; duration of oestrus 69 hours; slaughtered 22.6.43; pregnancy 26 days.

C.L.Gr.: l.o. 9, r.o. 3; diameters 9—10 mm. The colour of the corpora lutea is pale purplish vinaceous. A fine network of bloodvessels appears on all surfaces. The shape is spherical. The consistency is soft. On section the cut surfaces are light flesh-coloured and all cavities are closed in with fibrous connective tissue.

Of the previous corpora lutea only brownish remains can be found

The follicles are seashell pink and the largest ones show faint vascularisation. The total number is 68, their sizes varying from less than 1 mm. to 5 mm., only a small minority being of the smallest class.

The left cornu carries only one normal embryo, which measures 2.0 cm. There are also 3 atrophic embryos, 2 of which are represented by gelatinous masses; the third is recognisable only from the clearly previous gravid condition of the cornu in one section. The right side has one normal embryo which measures 2.0 cm. and one resorbed embryo, whose previous existence is shown by the presence of the empty membranes in one part of the cornu.

(5) *Sow No.* 215.—Oestrus on 31.7.43, 6 p.m.; served 2.8.43; 10.30 p.m., 54 hours after onset of oestrus; duration of oestrus 66 hours; slaughtered 27.8.43; pregnancy 25 days.

C.L.Gr.: l.o. 8, r.o. 8; diameters 10—14 mm. The corpora lutea have a pale purplish vinaceous colour. The consistency is fairly firm; the shape is spherical and rupture points are still visible on two corpora. Bloodvessels appear on all surfaces. There are no cavities on section. The cut surfaces are flesh-coloured.

Of the older corpora lutea not even remains can be found on sectioning the ovaries.

The colour of the follicles is from opaque white for the smaller ones to seashell pink for the largest ones. Sizes merge into each other from 1 to 5 mm. The total number is 100.

The right cornu carries one apparently normal embryo; it was considered as normal even though there is evidence of a fairly congested condition and the size is only 1.6 cm. Of the 5 embryos in the left and the further 2 in the right cornu, only one shows as a white amorphous mass, measuring 3 mm., their previous existence being evident only from the embryonic membranes, which occupy about one third of the area of a normal embryo.

(6) *Sow No.* 188.—Oestrus on 27.8.43, 3 p.m.; served 29.8.43, 7.30 p.m., 54 hours after onset of oestrus; duration of oestrus 54 hours; slaughtered 24.9.43; pregnancy 26 days.

C.L.Gr.: l.o. 13, r.o. 0; diameters 10—11 mm. The colour of the corpora lutea is pale purplish vinaceous, the shape is spherical and the consistency is medium firm. Blood-vessels are plentiful and very clear. All central cavities have disappeared and their places filled with fibrous tissue. There are no corpora in the right ovary.

Of the older corpora lutea only 4 can be found, all in the left ovary, measuring about 2 mm., of a light yellow to a brownish colour.

The follicles are opaque for the smaller ones and seashell pink coloured for the largest group. No capillaries are present. Sizes range from 1 to 5 mm. The total number is 131.

Each of the cornua carries 2 apparently normal embryos, all 1.9 cm. long, two of which show rather much congestion in the walls of the surrounding cornua. In the left cornu one atrophic embryo measures 7 mm., the outline of its body still showing clearly; of a second one only the embryonic membranes remain. On the right side there is one atrophic embryo which is 1.2 cm. long, a further 2 are present as gelatinous masses.

(7) *Sow No.* 193.—Oestrus on 18.8.43, 6 p.m.; served 20.8.43, 10.30 p.m., 54 hours after onset of oestrus; duration of oestrus 72 hours; slaughtered 16.9.43; pregnancy 27 days. She was served at 54 hours as she previously had oestrous durations of 60, 57 and 60 hours only.

C.L.Gr.: l.o. 8, r.o. 9; diameters 9—12 mm. The colour of the corpora lutea is pale purplish vinaceous. There is a clear network of bloodvessels over all these bodies. Their consistency is medium firm and the shape is spherical. On section they are light flesh-coloured and all cavities have been plugged with fibrous tissue.

Of the older corpora lutea only 4 can be found in the two ovaries; they all measure 3 mm. Their colour is creamy yellow.

The colour of the follicles is seashell pink. Sizes merge into each other from 1 to 4 mm., the majority being 2 to 4 mm. The total number is 82.

There are 4 apparently normal embryos in each of the two cornua, each 2.1 cm. long. One embryo on each side showed congestion of the bloodvessels but no further clear signs of atrophy can be detected.

(8) *Sow No.* 221.—Oestrus on 2.9.43, 12 noon; served 4.9.43, 4.30 p.m., 54 hours after onset of oestrus; duration of oestrus 66 hours; slaughtered 1.10.43; pregnancy 27 days.

C.L.Gr.: l.o. 6, r.o. 9; diameters 9—10 mm. The corpora lutea have a pale purplish vinaceous colour. Their shape is spherical and the consistency medium firm only. Scar tissue at the points of rupture appear on a few only. Vascularisation is very clear. No cavities are present on section.

The older corpora lutea are creamy yellow and are up to 3 mm. in diameter, some showing only as brownish remains.

The largest follicles are seashell pink in colour with capillaries on the largest ones only. Sizes grade up imperceptibly from 1 to 5 mm. The total number is 83.

The left cornu carries 6 normal embryos and an atrophic one. Of the latter only a gelatinous mass remains of about 5 mm. diameter. On the right side there are 3 normal and 2 atrophic embryos. One of the latter consists of only a grayish mass 1.2 x 0.5 cm.; the second one is of about normal size but is classed as atrophic because of large blood clots in the head and neck regions and because of much congestion of the foetal membranes.

Large Whites.

(Groups 1 to 4).

Group 1. Sows Served at Zero Hour of Oestrus.

(1) *Sow No.* 68.—Oestrus on 24.9.42, 12 noon; duration of oestrus 57 hours, slaughtered 20.10.42; pregnancy 26 days.

C.L.Gr.: l.o. 12, r.o. 7; diameters 6—12 mm. Their surfaces have numerous blood-vessels. The majority are spherically shaped. On section the cut surfaces are light flesh-coloured and a few still show the remains of central cavities. Only one measures 6 mm., the balance being 9 to 12 mm. in diameter.

Older corpora lutea show merely as yellowish remains, but a few are about 2 mm. in diameter.

The follicles are seashell pink, capillaries appearing on the largest group. The total number is 139, the smallest group being less than 1 mm. and the largest individuals 6 mm.

The right cornu contains 6 and the left cornu 8 normal embryos, 1.7 cm. long.

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(2) *Sow No.* 72.—Oestrus on 22.3.41, 3 p.m.; duration of oestrus 57 hours; slaughtered on 22.4.41; pregnancy 31 days.

C.L.Gr.: l.o. 11, r.o. 11; diameters 6—9 mm. The corpora lutea have a pale purplish vinaceous colour. The shape is spherical to almost conical. Bloodvessels are profuse on the surfaces. On section all cavities are found closed in with fibrous tissue and the cut surfaces are flesh-coloured.

Older corpora lutea show only as whitish to brownish remains.

The follicles are seashell pink. The total number is 103, sizes grade up imperceptibly from 2 mm. to 7 mm.

The left cornu carries 5 and the right 3 embryos, each 2.5 cm. long. An atrophic embryo appears on the right side with a diameter of 7 mm., the whole body being greatly congested.

(3) *Sow No.* 96.—Oestrus on 29.8.42, 12 noon; duration of oestrus 45 hours; slaughtered 25.9.42; pregnancy 27 days.

C.L.Gr.: l.o. 15, r.o. 3; diameters 9—11 mm. The corpora lutea are spherically shaped and vascular. On section the cut surfaces are flesh-coloured and all cavities have disappeared.

Of the older corpora lutea only a few can be found, the largest being 2 mm., their colour is yellowish.

The follicles are a seashell pink for the largest group, the smaller sizes being an opaque white. The larger ones show capillaries. There are 108 in all, their sizes ranging from below 1 mm. to 5 mm.

Each cornu carries 8 normal embryos, 2.0 to 2.1 cm. long. With only 3 corpora in the right ovary, this is a clear case of migration of the embryo.

(4) *Sow No.* 116.—Oestrus on 25.11.42, 6 p.m.; duration of oestrus 39 hours; slaughtered 22.12.42; pregnancy 27 days.

C.L.Gr.: l.o. 9, r.o. 6; diameters 8—10 mm. The corpora lutea have a pale purplish vinaceous colour. Bloodvessels are very plentiful. Their shape is spherical. On section the cut surfaces are flesh-coloured.

Only 3 older corpora lutea can be found, all in the left ovary, 3 mm. in diameter and of a creamy yellow colour.

The larger follicles are seashell pink coloured. Capillaries show faintly. There are 142 in all, the smallest ones are below 1 mm. and the largest individuals 5 mm.

Each cornu carries 7 normal embryos, their lengths varying from 2 to 2.1 cm. With only 6 corpora in the right ovary, migration seems probable.

(5) *Sow No.* 124.—Oestrus 21.11.42, 12 midnight; duration of oestrus 57 hours; slaughtered 17.12.42; pregnancy 26 days.

C.L.Gr.: l.o. 8, r.o. 6; diameters 8—10 mm. The colour of the corpora lutea is pale purplish vinaceous. The shape is spherical and many bloodvessels appear on the surfaces. The cut surfaces are flesh-coloured and all cavities have disappeared.

No previous corpora can be found on sectioning of the ovaries.

The colour of the follicles is seashell pink. Capillaries appear on the largest group. The total number is 87; diameters range from 1 to 6 mm., there being very few of the 1 mm. class.

The left cornu carries 6 and the right cornu 5 apparently normal embryos, all measuring 1.7 cm. Although the size is below the normal for this age, there are no signs of any conditions indicative of atrophy. The right side further contains a resorbed embryo of which only whitish remains are present in the embryonic membranes.

(6) *Sow No.* 132.—Oestrus on 2.10.42, 9 a.m.; duration of oestrus 33 hours; slaughtered 28.10.42; pregnancy 26 days.

C.L.Gr.: l.o. 7, r.o. 12; diameters 9—10 mm. The corpora lutea are pale purplish vinaceous in colour. Bloodvessels are plentiful over their surfaces. The shape is mostly spherical. On section all cavities are found closed with fibrous tissue and the cut surfaces are light flesh-coloured.

The remains of older corpora lutea measure up to 2 mm. and their colour is a creamy yellow.

The largest follicles are seashell pink in colour and capillaries are just visible at their bases. Their total number is 131, the smallest ones being below 1 mm. and the largest 5 mm.

The left cornu carries 7 and the right cornu 6 normal embryos, their lengths varying from 9 to 10 mm.

(7) *Sow No.* 134.—Oestrus on 22.8.42, 9 a.m.; duration of oestrus 42 hours; slaughtered 17.9.42; pregnancy 26 days.

C.L.Gr.: l.o. 8, r.o. 6; diameters 8—10 mm. The colour of the corpora lutea is pale purplish vinaceous and their shape spherical, bloodvessels showing clearly on their surfaces. Fibrous veins on section indicate the previous sites of the central cavities. The cut surfaces have a flesh colour.

The majority of the older corpora lutea are hardly visible; one is 3 mm. and a second one 9 mm. in diameter. The latter one on section is pale yellow, solid and very firm, and cannot be a corpus luteum graviditatis.

The largest follicles are seashell pink in colour with capillaries just visible. There are 59 in all, their sizes ranging from 1 to 5 mm.

The left and right cornu carries 5 and 2 normal embryos respectively, all being 1.9 cm. long.

(8) *Sow No.* 143.—Oestrus on 4.11.42, 12 noon, duration of oestrus 48 hours; slaughtered 30.11.42; pregnancy 26 days.

C.L.Gr.: l.o. 11, r.o. 5; diameters 8—10 mm. The corpora lutea have a pale purplish vinaceous colour, their general shape is spherical and numerous bloodvessels show clearly on their surfaces. The cut surfaces are light flesh-coloured on section and all central cavities have disappeared.

Of the older corpora lutea a total of only 4 can be found, deep orange-coloured and 2.5 mm. in diameter, the scattered remains of the rest being just visible.

The follicles have a seashell pink colour. Capillaries are not visible on the largest group. The total number is 163. They vary in size from below 1 mm. to 5 mm.

There are 5 and 10 normal embryos in the left and right cornu respectively. All, except two, vary in length from 1.8 to 1.9 cm. Two embryos in the right cornu are only 1.5 and 1.6 cm. long respectively; both appear quite normal in every other respect. They are enclosed in one allantoic sac, their bloodvessels not coalescing. Monovular twinning is strongly suspected but is not accepted as such. With only 5 corpora in the right ovary migration of embryos is clearly indicated.

(9) *Sow No.* 147.—Oestrus on 13.11.42, 9 a.m.; duration of oestrus 36 hours; slaughtered 9.12.42; pregnancy 26 days.

C.L.Gr.: l.o. 11, r.o. 6; diameters 9—10 mm. The corpora lutea have a pale purplish vinaceous colour, their shape is spherical and bloodvessels show very clearly on their surfaces. On section they are light flesh-coloured and the cavities have been filled in with fibrous connective tissue.

A total of 8 older corpora lutea, 2 to 3 mm. in diameter, can be found, the remains of others of about 1 mm. diameter are also present; their colour is a creamy yellow.

The follicles have a seashell pink colour, capillaries showing clearly at the bases of the largest ones. The total number is 80; only 3 measure 1 mm., the rest grade up in size to 5 mm.

There are 5 and 6 normal embryos in the left and right side of the uterus respectively, their lengths being 1.9 to 2 cm. The left side contains in addition an atrophic embryo which is only 1.6 cm. long, greatly congested in the abdominal region, its compartment about one-half the size of the others.

(10) *Sow No.* 149.—Oestrus on 23.11.42, 6 p.m.; duration of oestrus 39 hours; slaughtered 18.12.42; pregnancy 25 days.

C.L.Gr.: l.o. 8, r.o. 4; diameters 9—10 mm. The corpora lutea have a pale purplish vinaceous colour, their general shape is spherical and bloodvessels are plentiful. On section the cut surfaces are light flesh-coloured with no central cavities, connective tissue occupying their previous sites.

Of the older corpora lutea there is a total of 6 in the two ovaries, all measuring 2 mm. and of a pale yellow colour.

The follicles have a seashell pink colour, especially the largest ones, the latter also showing capillaries very clearly. There are 133 in all, ranging in size from 1 to 5 mm.

The left cornu has 4 and the right cornu 6 normal embryos, all 1.5 cm. long.

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Group 2. Sows Served at the 12th Hour of Oestrus.

(1) *Sow No. 18.*—Oestrus on 23.3.41, 3 a.m.; served 23.3.41, 1.30 p.m.; duration of oestrus 36 hours; slaughtered 22.4.41; pregnancy 30 days.

C.L.Gr.: l.o. 4, r.o. 6; diameters 8—11 mm. The corpora lutea have a pale purplish vinaceous colour. The majority are spherically shaped but a number are conically inclined. The cut surfaces are pale flesh-coloured and all central cavities have disappeared. Their surfaces have a clear network of bloodvessels. The consistency is soft.

Older corpora lutea are present only as small whitish to yellowish spots.

The follicles are a very light seashell pink and their shape spherical to conical. A correct count is not possible because of the large number of small follicles of below 1 mm.; the largest ones have diameters of 5 to 6 mm.

The right side carries 5 and the left side 3 embryos, all apparently normal, all being 2 cm. long.

(2) *Sow No. 79.*—Oestrus on 16.5.41, 9 a.m.; served 16.5.41, 7.30 p.m.; duration of oestrus 33 hours; slaughtered 10.6.41; pregnancy 25 days.

C.L.Gr.: l.o. 7, r.o. 12; diameters 9—10 mm. The colour of the corpora is pale purplish vinaceous. The shape is spherical. A clear network of bloodvessels appear on all surfaces. On section the cut surfaces are light flesh-coloured and all central cavities have disappeared.

A number of older corpora lutea show on the surfaces of the ovaries, the largest measuring 3 mm. The colour is light yellow.

The largest follicles have a seashell pink colour and the smaller ones are an opaque white. The two ovaries carry a total of 122 follicles, their diameters ranging from less than 1 mm. to 5 mm.

The left side of the uterus contains 6 apparently normal embryos, 1.8 to 1.9 cm. in length. In addition, there are 3 embryos, classed as atrophic because of their much retarded development generally, all being 1.4 cm. long. The right cornu carries 6 apparently normal embryos, 1.7 to 1.8 cm. in length. In addition there is one classed as atrophic, similar to the atrophic one on the left side.

(3) *Sow No. 102.*—Oestrus on 12.10.42, 9 p.m.; served 13.10.42, 7.30 a.m.; duration of oestrus 48 hours; slaughtered 9.11.42; pregnancy 27 days.

C.L.Gr.: l.o. 9, r.o. 11; diameters 8—10 mm. The corpora lutea have a pale purplish vinaceous colour. All are more deeply bedded in the ovary than usual. The shape is spherical and bloodvessels are very plentiful. The cut surfaces are a pale flesh colour, central cavities still showing in some.

Only 2 older corpora lutea can be found, of a deep yellow colour and about 2 mm. in diameter.

The largest follicles have a seashell pink colour and no capillaries are visible on their surfaces. Their total number is 181, the smallest group is below 1 mm. and the largest 5 mm.

The left cornu contains 9 and the right 7 embryos, varying from 1.8 to 2 cm. in length. One embryo is carried in a rather reduced section of the cornu but its general appearance is normal otherwise.

(4) *Sow No. 103.*—Oestrus on 10.2.42, 3 a.m.; served 10.8.42, 1.30 p.m.; duration of oestrus 33 hours; slaughtered 4.9.42; pregnancy 25 days.

C.L.Gr.: l.o. 8, r.o. 9; diameters 8—11 mm. All corpora lutea have a pale purplish vinaceous colour. Bloodvessels are plentiful. A few still show the points of rupture clearly. On section only vestiges of the central cavities show in some; the cut surfaces are flesh-coloured. The general shape is spherical.

Of the older corpora lutea only traces remain.

The follicles are a seashell pink and capillaries appear on the largest group. Their total is 83, the smallest group being below 1 mm. and the largest individuals 5 mm.

In the left cornu 3 embryos are present in one gravid section, 2 of which are normal; one is almost completely resorbed and is represented only by a whitish mass of amorphous matter. On this side there are 8 normal embryos. The right cornu contains one embryo classed as atrophic because of its length of only 1.3 cm. against the over-all length of 1.7 for the other 7 normal ones and because of its under-development generally. Migration from right to left is probable as the left side has only 8 corpora lutea, but twinning on this latter side is also not improbable.

(3) *Sow No.* 126.—Oestrus on 25.8.42, 6 a.m.; served 25.8.42, 4.30 p.m.; duration of oestrus 51 hours; slaughtered 21.9.42; pregnancy 27 days.

C.L. Gr.: l.o. 9, r.o. 8; diameters 8—9 mm. The colour of all corpora lutea is pale purplish vinaceous. Bloodvessels show clearly on their surfaces. Points of rupture are still visible on some only. No central cavities remain and the cut surfaces are pale flesh-coloured. The general shape is spherical.

Only one of the older corpora lutea can be found, 2 mm. in diameter.

The colour of the follicles is seashell pink and the largest group possesses faint capillaries. There are 74 follicles in all, the smallest group is below 1 mm. in size and the largest 5 mm.

The left and right side of the uterus carries 8 and 6 normal embryos respectively, their lengths being 1.9 to 2 cm. The right side has one embryo classed as atrophic because it is only 1.4 cm. long, is greatly under-developed generally and occupies a much reduced section of the cornu.

(6) *Sow No.* 128.—Oestrus on 16.9.42, 6 a.m.; served 16.9.42, 4.30 p.m.; duration of oestrus 54 hours; slaughtered 14.10.42; pregnancy 28 days.

C.L. Gr.: l.o. 9, r.o. 9; diameters 6—10 mm. The colour of the corpora lutea is pale purplish vinaceous. The shape is spherical generally but 3 are distinctly conical with constricted heads, producing beadlike summits. Bloodvessels are plentiful. Only fibrous tissue marks the former sites of the cavities. The cut surfaces are dark flesh-coloured. Only one corpus measures 6 mm., the balance being 8 mm. and larger.

Of the older corpora lutea only one measures 2 mm., the balance being 1 mm. and less. Their colour is distinctly yellow.

The follicles are pinkish in colour for the larger ones and opaque white for the smaller groups. Capillaries show on the larger bodies. Their total is 123. Sizes range from less than 1 mm. to 4 mm.

The left cornu carries 5 and the right cornu 7 normal embryos, 1.8 to 1.9 cm. long. The left side contains, in addition, one atrophic embryo, 8 mm. long and without any appendages.

(7) *Sow No.* 135.—Oestrus on 15.9.42, 3 a.m.; served 15.9.42, 1.30 p.m.; duration of oestrus 42 hours; slaughtered 13.10.42, pregnancy 28 days.

C.L.Gr.: l.o. 9, r.o. 7; diameters 7—11 mm. The colour is pale purplish vinaceous. Bloodvessels appear in abundance on all surfaces. The shape is spherical. The cut surfaces are pale flesh-coloured, greatly reduced cavities showing in a few.

The older corpora lutea vary in size from mere vestiges up to 3 mm., their colour being yellow.

The follicles are seashell pink in colour for the largest group. Capillaries show clearly on the larger ones. The total number is 105 and they range in size from less than 1 to 5 mm.

There are 5 and 9 apparently normal embryos in the left and right cornu respectively, all 2.2 mm. long. Migration from left to right is indicated as the right ovary carries only 7 corpora.

(8) *Sow No.* 136.—Oestrus on 15.9.42, 3 a.m.; served 15.9.42, 1.30 p.m.; duration of oestrus 33 hours; slaughtered 14.10.42; pregnancy 29 days.

C.L.Gr.: l.o. 9, r.o. 7; diameters 9—10 mm. The colour is pale purplish vinaceous. The shape is spherical to conical and bloodvessels show on all corpora. The bodies are flesh-coloured on section and fibrous connective tissue have taken the places of the central cavities.

A few of the older corpora lutea measure up to 3 mm.

The larger follicles are seashell pink in colour and capillaries show on their surfaces. There are 118 follicles in all. Sizes range from below 1 mm. to 5 mm.

All embryos appear to be normal, there being 4 on the left and 5 on the right side. Sizes vary from 2.1 to 2.2 cm.

(9) *Sow No.* 137.—Oestrus on 10.9.42, 9 p.m.; served 11.9.42, 7.30 a.m.; duration of oestrus 42 hours; slaughtered 7.10.42; pregnancy 26 days.

C.L.Gr.: l.o. 8, r.o. 6; diameters 9—10 mm. The corpora have a pale purplish vinaceous colour. All have a network of bloodvessels and their shape is spherical. Cavities have disappeared.

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The number of older corpora lutea cannot be determined, the largest being 3 mm. in diameter. Their colour is bright yellow.

The larger follicles are seashell pink-coloured, the smaller ones are opaque white, some being almost colourless. There are 82 follicles in all; their sizes range from less than 1 mm. to 5 mm.

There are 6 and 3 normal embryos in the left and right cornu respectively, their lengths ranging from 1.9 to 2 cm.

(10) *Sow No.* 142.—Oestrus on 16.9.42, 9 a.m.; served 16.9.42, 7.30 p.m.; duration of oestrus 33 hours; slaughtered 13.10.42; pregnancy 27 days.

C.L.Gr.: l.o. 8, r.o. 9; diameters 8—10 mm. The colour of the corpora is pale purplish vinaceous. On section the cut surfaces are flesh-coloured. There are no central cavities. The shape is spherical and bloodvessels appear on all surfaces.

Only one of the older corpora lutea, 2 mm. in diameter, can be found in the two ovaries, others showing as small spots only.

The larger follicles are seashell pink in colour and capillaries appear at their bases. There are 103 of these bodies in all, their sizes varying from less than 1 mm. to 5 mm.

There are 10 and 7 apparently normal embryos in the left and right cornu respectively, their lengths being 2 to 2.1 cm. Migration from right to left is apparent, as the right ovary carries only 8 corpora.

Group 3. Sows Served at the 24th Hour of Oestrus.

(1) *Sow No.* 65.—Oestrus on 3.4.41, 12 noon; served 4.4.41, 10.30 a.m.; duration of oestrus 48 hours; slaughtered 30.4.41; pregnancy 26 days.

C.L. Gr.: l.o. 5, r. o. 9; diameters 8—11 mm. The colour of the corpora lutea is pale purplish vinaceous. All corpora are clearly vascularised. The shape is spherical and the consistency soft. On section all cavities are seen to have disappeared and the cut surfaces are flesh-coloured.

Of the older corpora lutea only yellowish remains can be found.

The follicles are seashell pink in colour. No capillaries appear on the larger group. The total number of follicles is 104 and their diameters range from 1 to 5 mm.

The left horn of the uterus carries 5 and the right horn 7 apparently normal embryos, measuring 2.0 cm. The right side also contains one embryo which is being classed as atrophic on account of its length of only 1.3 cm., its under-development generally and the small area occupied by its membranes.

(2) *Sow No.* 77.—Oestrus on 2.5.41, 9 a.m.; served 3.5.41, 7.30 a.m.; duration of oestrus 54 hours; slaughtered 29.5.41; pregnancy 26 days.

C.L.Gr.: l.o. 10, r.o. 4; diameters 9—11 mm. The colour of the corpora lutea is pale purplish vinaceous. The shape is spherical and the consistency soft. A clear network of bloodvessels appears on all the surfaces. On section the central cavities are still showing and the cut surfaces are flesh-coloured.

The older corpora lutea are still clearly visible, measuring up to 3 mm., their colour is creamy yellow.

The follicles are seashell pink in colour. Capillaries show at the bases of the largest group. Their total number is 180. Diameters range from less than 1 mm. to 7 mm.

The left side of the uterus carries 7 and the right side 4 apparently normal embryos, all being 2.1 cm. long. Three of these embryos show considerable congestion in the centre of their bodies but as they appear normal in all other respects they are being classed as such. The right cornu carries, in addition, only the foetal membranes of a completely resorbed embryo.

(3) *Sow No.* 80.—Oestrus on 14.4.41, 9 p.m.; served 15.4.41, 7.30 p.m.; duration of oestrus 33 hours; slaughtered 12.5.41; pregnancy 27 days.

C.L.Gr.: l.o. 5, r.o. 9; diameters 8—11 mm. The corpora lutea are pale purplish vinaceous coloured externally and flesh-coloured on section. All central cavities have disappeared. A clear network of bloodvessels appears on all corpora. The general shape is spherical but a few are conically inclined.

Older corpora lutea appear only as small brownish to whitish remnants.

The follicles are rather smaller than usual. In the left ovary there are none above 2 mm. and probably 50 per cent. are just on 2 mm. in diameter. In the right ovary a few measure up to 3 mm. The smallest group is below 1 mm. The colour is seashell pink for all follicles. There are no capillaries. An exact count is very difficult but the approximate total is 234.

The left side of the uterus contains 2 and the right side 1 normal embryos, measuring 2 to 2.1 cm. in length.

(4) *Sow No. 82.*—Oestrus on 20.4.41, 9 a.m.; served 21.4.41, 7.30 a.m.; duration of oestrus 27 hours; slaughtered 16.5.41; pregnancy 25 days.

C.L.Gr.: l.o. 12, r.o. 7; diameters 8—10 mm. The colour of the corpora lutea is pale purplish vinaceous. The majority are spherically shaped but a few are conically inclined. Bloodvessels show clearly on all surfaces. The consistency is soft. On section these bodies are flesh-coloured and all cavities have disappeared.

Previous corpora lutea appear only as small whitish spots.

The follicles are seashell pink in colour, the larger ones showing faint capillaries. The two ovaries carry 122 follicles whose diameters range from less than 1 mm. to 6 mm.

The left cornu carries 6 normal embryos and the right cornu 9, their lengths varying from 1.9 to 2 cm. The latter side contains an additional embryo which is 1.9 cm. long but the general development is only about half that of the others and is very much congested. Furthermore it appears in the same gravid section as another apparently normal embryo, its bloodvessels fusing with that of its mate. As monovular twinning is strongly indicated, the number of embryos is taken as 9 and not 10, the abnormal one being discarded.

(5) *Sow No. 104.*—Oestrus on 28.9.42, 3 p.m.; served 29.9.42, 1.30 p.m.; duration of oestrus 57 days; slaughtered 26.10.42; pregnancy 27 days.

C.L.Gr.: l.o. 12, r.o. 9; diameters 9—10 mm. The colour of the corpora lutea is pale purplish vinaceous. The majority is spherical but some are conically inclined. Bloodvessels are plentiful. On section they are light flesh-coloured and all cavities have disappeared, fibrous tissue having taken their places.

Of the older corpora lutea only two remnants can be seen, about 1 mm. in diameter.

The follicles have a faint seashell pink colour. Capillaries are visible on the largest group. The total in the two ovaries is 113 and they range in size from about 1 mm. to 5 mm.

Each side of the uterus carries 9 normal embryos, all 2 cm. long.

(6) *Sow No. 105.*—Oestrus on 25.5.42, 9 a.m.; served 26.5.42, 7.30 p.m.; duration of oestrus 60 hours; slaughtered 17.6.42; pregnancy 22 days. (This sow is also being utilised for the study of the ovary of the pregnant sow).

C.L.Gr.: l.o. 9, r.o. 12; diameters 8—9 mm. The corpora lutea are pale purplish vinaceous in colour. A network of bloodvessels shows on the surfaces and the points of rupture still show clearly on some. On section, the cut surfaces have a flesh colour and a number show central cavities containing a little liquor.

Of the older corpora lutea only minute white spots are visible, measuring less than 1 mm.

The follicles are seashell pink in colour, no capillaries being visible. There are 108 in all, diameters ranging from about 1 mm. to 5 mm.

There are 5 and 11 normal embryos in the left and right side of the uterus respectively, their lengths being 1.2 cm. In addition, there is one clearly atrophic embryo in each cornu, their respective lengths being 8 and 7 mm., and greatly under-developed.

(7) *Sow No. 106.*—Oestrus on 20.10.42, 6 p.m.; served 21.10.42, 4.30 p.m.; duration of oestrus 60 hours; slaughtered 16.11.42; pregnancy 26 days.

C.L.Gr.: l.o. 9, r.o. 6; diameters 9—10 mm. The corpora lutea are pale purplish vinaceous coloured. The general shape is spherical. Bloodvessels show clearly on all of these bodies. A number are very deep-seated. They are flesh-coloured on section and central cavities show faintly in some only.

A few of the previous corpora lutea can be identified, deep yellow in colour and about 2 mm. in diameter.

The follicles are seashell pink in colour and capillaries can be seen on the majority of the larger ones. The total number is 121, 26 of which have diameters varying from 7 to 9 mm., which is almost that of the mature follicles; they are, however, not so turgid and glistening as at maturity. Three of these have a dark bluish colour, emitting a red watery liquid on being ruptured. The smallest sizes are below 1 mm.

SEX PHYSIOLOGY OF PIGS.

The left cornu carries 6 and the right cornu 5 normal embryos, which measure 1·9 to 2·0 cm.

(8) *Sow No. 118.*—Oestrus on 1.6.42, 12 noon; served 2.6.42, 10.30 a.m.; duration of oestrus 42 hours; slaughtered 29.6.42; pregnancy 27 days.

C.L.Gr.: l.o. 3, r.o. 9; diameters 8—9 mm. Externally the corpora lutea are pale purplish vinaceous and on section pale flesh-coloured. Faint fibrous veins indicate the previous sites of the central cavities. A clear network of bloodvessels shows on all corpora. Their general shape is spherical.

Mere traces of older corpora lutea can be seen but a few measure up to 2 mm.; the colour is deep yellow.

The follicles are seashell pink and capillaries are visible at the bases of some of the larger ones. The total number is 116, diameters varying from less than 1 mm. to 7 mm. The smaller follicles are almost colourless.

Each side of the uterus carries 4 normal embryos, their lengths being 1·9 to 2·1 cm.

(9) *Sow No. 125.*—Oestrus on 23.8.42, 9 p.m.; served 24.8.42, 7.30 p.m.; duration of oestrus 54 hours; slaughtered 18.9.42; pregnancy 25 days.

C.L.Gr.: l.o. 7, r.o. 7; diameters 9—14 mm. Externally the corpora lutea are pale purplish vinaceous in colour, and on section light flesh-coloured. All cavities have disappeared and bloodvessels appear on all surfaces. Ovulation points still show on a few.

A number of older corpora lutea are still clearly visible with diameters of about 2 mm., the rest are mere remnants and difficult to count. Their colour is creamy yellow.

The follicles have a clear seashell pink colour and capillaries appear on the largest group. The total is 125, and their sizes range from below 1 mm. to 5 mm.

The left side of the uterus carries 5 and the right side 6 apparently normal embryos. Their lengths range from 1·7 to 1·8 cm.

(10) *Sow No. 131.*—Oestrus on 20.8.42, 12 noon; served 21.8.42, 10.30 a.m.; duration of oestrus 45 hours; slaughtered 16.9.42; pregnancy 26 days.

C.L.Gr.: l.o. 7, r.o. 7; diameters 8—9 mm. The colour of the corpora lutea is pale purplish vinaceous. The general shape is spherical and a clear network of bloodvessels appears on all surfaces. On section the cut surfaces are a light pinkish flesh-colour and no central cavities are present.

Only remnants of older corpora lutea are present, a few measuring up to 2 mm., the colour being a light yellow.

The follicles are seashell pink in colour but no capillaries are apparent on the largest group. Their total number is 107, sizes ranging from below 1 mm. to 5 mm.

The left side of the uterus carries 8 and the right side 7 normal embryos, all being 2·1 cm. long. The number of embryos is in excess of the number of corpora lutea by one.

Group 4. Sows Served at the 36th Hour of Oestrus.

(1) *Sow No. 69.*—Oestrus on 20.4.41, 9 p.m.; served 22.4.41, 7.30 a.m.; duration of oestrus 48 hours; slaughtered 19.5.41; pregnancy 27 days.

C.L.Gr.: l.o. 6, r.o. 11; diameters 7—9 mm. The colour of the corpora lutea is pale purplish vinaceous. On section all cavities are seen to have disappeared, fibrous veins indicating their previous sites. All corpora have a clear network of bloodvessels. The general shape is spherical but a number are conically inclined.

Older corpora lutea show as brownish remnants, a few measuring up to 2 mm.

The larger follicles are seashell pink in colour. The approximate total number is 127 and their sizes range from below 1 mm. to 5 mm.

The left cornu carries 5 and the right cornu 7 apparently normal embryos, all 2·2 cm. long. One atrophic embryo appears in the right side, 1·8 cm. long and greatly underdeveloped in all respects.

(2) *Sow No. 70.*—Oestrus on 7.4.41, 9 a.m.; served 8.4.41, 7.30 p.m.; duration of oestrus 48 hours; slaughtered 5.5.41; pregnancy 27 days.

C.L.Gr.: l.o. 9, r.o. 7; diameters 6—11 mm. Only one is 6 mm., the rest are 9 mm. and larger. The colour of the corpora lutea is pale purplish vinaceous. On section the cut surfaces are flesh-coloured and central cavities still persist in a few, measuring about 2 mm. Rupture points still show on two corpora. Bloodvessels appear on all surfaces. The shape is spherical but one is distinctly conical. The consistency is rather soft.

Older corpora lutea show as whitish or brownish spots, 2 mm. and less in diameter.

The follicles are pinkish in colour. No capillaries can be seen on the largest group. The total number is 117, their sizes ranging from less than 1 mm. to 6 mm.

The left and right cornu each carries 4 normal embryos, 2 cm. long. An atrophic embryo also appears in the left side, 5 mm. long, whitish coloured and of irregular shape.

(3) *Sow No.* 71.—Oestrus on 24.4.41, 12 midnight; served 26.4.41, 10.30 a.m.; duration of oestrus 45 hours; slaughtered 23.5.41; pregnancy 27 days.

C.L.Gr.: l.o. 9, r.o. 9; diameters 8—11 mm. The colour of the corpora lutea is pale purplish vinaceous. On section all cavities are seen to have disappeared and the colour is light flesh. All have a clear network of bloodvessels and the shape is spherical to conical. Their consistency is soft.

Only remnants of older corpora lutea can be seen, their diameters being up to almost 3 mm.; the colour is orange yellow.

The follicles are seashell pink in colour. Capillaries show on the surfaces of the larger ones. The total number is 95. Their diameters range from below 1 mm. to 6 mm.

The left cornu carries 9 normal embryos, 1.8 to 1.9 cm. and one atrophic embryo, 1.4 cm. long which is suspended in a bloody red liquid. On the right side there are 4 normal embryos, 1.8 to 2.1 cm. long, one of these being somewhat less developed than its mates, but accepted as being normal on its general appearance.

(4) *Sow No.* 73.—Oestrus on 31.3.41, 12 midnight; served 2.4.41, 10.30 a.m.; duration of oestrus 48 hours; slaughtered 28.4.41; pregnancy 26 days.

C.L.Gr.: l.o. 7, r.o. 9; diameters 7—9 mm. The colour of the corpora lutea is pale purplish vinaceous. Bloodvessels show clearly on all the surfaces. The general shape is spherical. Rupture points still show on a few corpora. On section they are flesh-coloured and no central cavities are present. Their consistency is soft.

Older corpora lutea are present as yellowish remnants only.

The follicles are seashell pink in colour and capillaries are visible on the larger ones. The approximate total is 103 and they range from less than 1 mm. to 5 mm. in size.

The left cornu contains 9 and the right cornu 4 apparently normal embryos, 1.9 to 2.1 cm. long. On the right side appears one clearly atrophic embryo, 7 mm. long and much retarded in growth. A second one is also being classed as atrophic on this side, the length is 1.8 cm. and the head and legs very poorly developed, bloodvessels in the membranes being slightly congested. Migration from right to left is indicated, there being only 7 corpora lutea on the left side.

(5) *Sow No.* 76.—Oestrus on 3.4.41, 9 p.m.; served 5.4.41, 7.30 a.m.; duration of oestrus 45 hours; slaughtered 1.5.41; pregnancy 26 days.

C.L.Gr.: l.o. 12, r.o. 9; diameters 8—10 mm. The colour of the corpora is pale purplish vinaceous. The shape is spherical and bloodvessels appear on all corpora. Rupture points still show on two as slight elevated areas. Their consistency is soft. On section all central cavities are seen to have disappeared and the cut surfaces are flesh-coloured.

Only remnants of the older corpora lutea can be traced.

The follicles are seashell pink in colour. Capillaries are visible on the largest group. The total number is 95, their sizes ranging from below 1 mm. to 6 mm.

In the left side of the uterus there are 3 normal embryos, 2 to 2.1 cm. long. The left cornu carries an additional 3 atrophic embryos. Two are each 1.8 cm. long and are much under-developed generally. The third embryo is only 7 mm. long and of a whitish colour. The right cornu has 4 apparently normal embryos, 2 to 2.1 cm. in length, and one classed as atrophic because of its greatly retarded development and absence of eyes; its length is 1.8 cm.

(6) *Sow No.* 98.—Oestrus 25.1.42, 3 a.m.; served 26.1.42, 1.30 p.m.; duration of oestrus 66 hours; slaughtered 21.2.42; pregnancy 26 days.

C.L.Gr.: l.o. 6, r.o. 8; diameters 8—9 mm. The colour of the corpora is pale purplish vinaceous. There is a clear network of bloodvessels on all surfaces. On section the corpora are flesh-coloured and all central cavities have disappeared. The general shape is spherical.

Only remnants of previous corpora lutea are present, the largest being 3 mm. in diameter and their colour light yellow.

SEX PHYSIOLOGY OF PIGS.

The follicles are seashell pink in colour and a faint network of capillaries are visible on the largest group. A total of 90 can be counted. Their diameters range from below 1 mm. to 6 mm.

The left side of the uterus contains 7 and the right side 6 apparently normal embryos, their lengths varying from 1.8 to 1.9 cm. In addition, the left side carries 1 clearly atrophic embryo, a whitish mass 4 x 2 mm., situated in a clearly gravid portion of the cornu. Migration from right to left is indicated as only 6 corpora appear on the left ovary.

(7) *Sow No.* 101.—Oestrus on 1.12.42, 9 a.m.; served 2.12.42, 7.30 p.m.; duration of oestrus 54 hours; slaughtered 28.12.42; pregnancy 26 days.

C.L.Gr.: l.o. 10, r.o. 11; diameters 6—10 mm. The external colour of the corpora lutea is pale purplish vinaceous, their shape is spherical and numerous bloodvessels are present. On section they are light flesh-coloured and all central cavities have disappeared.

Only yellowish remnants of older corpora lutea are present.

The follicles are seashell pink in colour and faint capillaries are visible on the largest group. Their total is 150. Sizes range from less than 1 mm. to 5 mm., a large percentage being of the smallest class.

The left cornu carries 7 and the right cornu 9 normal embryos, all 2 mm. long.

(8) *Sow No.* 123.—Oestrus on 23.9.42, 3 a.m.; served 24.9.42, 1.30 p.m.; duration of oestrus 60 hours; slaughtered 20.10.42; pregnancy 26 days.

C.L.Gr.: l.o. 6, r.o. 12; diameters 9—11 mm. The general shape of the corpora is spherical. Bloodvessels stand out clearly on all surfaces. The external colour is pale purplish vinaceous. They are flesh-coloured on section. Only faint fibrous veins indicate the previous sites of the central cavities.

A number of older corpora lutea are up to 3 mm. in diameter, their colour being distinctly yellow.

The follicles are seashell pink in colour. Capillaries show at the bases of the large bodies. The total number is 78. Diameters range from less than 1 mm. to 6 mm., only a few being of the smallest class.

In the left cornu there are present 2 normal embryos, one 2 cm. and the other 1.7 cm. in length, the latter appearing to be normal in all other respects. In addition there is one atrophic embryo, a whitish mass 2 x 10 mm. Two normal embryos appear in the right cornu, each 2 cm. long, as well as an atrophic embryo, which is present as a whitish mass 1.4 cm. in length and with ill-defined appendages.

(9) *Sow No.* 138.—Oestrus on 30.11.42, 9 p.m.; served 2.12.42, 7.30 a.m.; duration of oestrus 42 hours; slaughtered 28.12.42; pregnancy 26 days.

C.L.Gr.: l.o. 7, r.o. 8; diameters 8—10 mm. All corpora lutea are pale purplish vinaceous in colour. The general shape is spherical and bloodvessels show clearly on their surfaces. They are light flesh-coloured on section and all cavities have disappeared.

Of the older corpora lutea 9 can be counted in the left and 6 in the right ovary, all about 3 mm. in diameter and of a creamy yellow colour.

The colour of the follicles is seashell pink and capillaries show distinctly over their surfaces. Their total is only 40. A largest group of 20 all have diameters of about 6 mm., these being sharply demarcated from the rest; the smaller group count is exceptionally low and there are none under 1 mm. in diameter.

In the left cornu there are 3 normal embryos, all 2 cm. long and one atrophic embryo, present as a white amorphous mass, 6 mm. in length. In the right cornu there are 2 normal embryos, 2 cm. long, as well as 3 atrophic bodies, one 1.5 cm. long, very congested and much under-developed; the second one is 1.2 cm. long and very similar to the first; the third one is 8 mm. long, even less developed than the first two.

(10) *Sow No.* 146. Oestrus on 9.12.42, 3 a.m.; served 10.12.42, 1.30 p.m.; duration of oestrus 54 hours; slaughtered 5.12.42; pregnancy 26 days.

C.L.Gr.: l.o. 8, r.o. 7; diameters 9—10 mm. The colour of the corpora lutea is pale purplish vinaceous. Bloodvessels show distinctly on all of these bodies. The general shape is spherical. On section they are pale flesh-coloured and no central cavities are left.

Of the previous corpora lutea there are 5 on the left and 3 on the right ovary, all 2 mm. in diameter and of a deep yellow colour; others show merely as remnants.

The follicles are seashell pink in colour and capillaries appear on the majority. The total number is 57. Sizes range from below 1 mm. to 7 mm. There are three and two normal embryos in the left and right cornu respectively, their lengths being 2.1 to 2.2 cm.

TABLE I.
Certain Particulars in the Optimum Service Period Observation.
Large Blacks.

Sow No.	Date of Service.	Temperature of Sow F.	Duration of Oestrus (Hours.)	RESULT.		No. of C.L.	NO. OF FOETUSES.		
				Positive. (P)	Negative. (N).		Alive.	Atrophic.	Total.
GROUP 1.—ZERO HOUR.									
52	29. 12. 42	102.2 103.0	63	P	—	14	12	0	12
87	3. 1. 42	—	45	P	—	12	6	0	6
92	16. 11. 42	101.6	90	P	—	13	8	0	8
111	12. 11. 42	—	63	—	N	—	—	—	—
115	16. 1. 43	102.6 103.0	33	P	—	12	13	0	13
121	27. 1. 43	102.8 104.0	72	P	—	16	9	0	9
123	17. 12. 42	103.6	48	P	—	17	15	1	16
124	22. 1. 43	103.0 103.8	42	P	—	16	14	0	14
128	11. 1. 43	103.2 104.0	45	P	—	16	6	2	8
138	18. 8. 42	—	66	—	N	—	—	—	—
147	24. 11. 42	—	54	P	—	11	3	2	5
151	8. 2. 43	102.6	66	P	—	6	1	1	2
GROUP 2.—12 HOUR PERIOD.									
41	14. 9. 42	101.0	66	P	—	18	11	2	13
112	29. 11. 42	102.2	75	P	—	13	9	0	9
132	14. 11. 42	101.8	54	P	—	14	12	1	13
138	21. 10. 42	—	57	P	—	12	12	0	12
154	19. 3. 42	102.2 103.0	66	P	—	12	7	1	8
157	27. 3. 43	102.8	78	P	—	14	9	2	11
183	30. 6. 43	—	54	—	N	—	—	—	—
184	7. 7. 43	101.2 102.0	51	P	—	13	12	0	12
186	25. 7. 43	101.0	57	—	N	—	—	—	—
191	26. 5. 43	—	60	P	—	13	6	4	10
192	10. 6. 43	101.6 102.4	—	—	—	—	—	—	—
		102.4	57	P	—	15	11	0	11
217	19. 9. 43	101.8	51	P	—	15	8	2	10
GROUP 3.—24 HOUR PERIOD.									
U45	28. 5. 41	—	42	P	—	18	7	0	7
49	6. 6. 41	—	57	P	—	15	0	2	2
55	29. 3. 41	—	69	P	—	11	10	0	10
94	11. 1. 42	102.0	66	P	—	14	6	1	7
110	11. 11. 42	—	72	P	—	14	8	1	9
125	14. 7. 42	102.8	63	—	N	—	—	—	—
131	13. 1. 43	102.8 103.2	78	P	—	14	13	0	13
136	18. 1. 43	102.9 104.3	93	P	—	13	12	1	13
144	18. 10. 42	—	66	P	—	10	4	0	4
148	8. 11. 42	—	75	P	—	11	6	2	8
187	25. 5. 43	101.2 102.4	54	P	—	13	6	2	8

SEX PHYSIOLOGY OF PIGS.

TABLE I (Continued).

Large Blacks.

Sow No.	Date of Service.	Temperature of Sow F.	Duration of Oestrus (Hours.)	RESULT.		No. of C.L.	NO. OF FOETUSES.		
				Positive. (P)	Negative. (N).		Alive.	Atrophic.	Total.
GROUP 4.—36 HOUR PERIOD.									
45C	24. 9.42	101.7	75	P	—	11	10	1	11
48	30. 1.41	—	48	—	N	—	—	—	—
57	5. 11.42	—	66	P	—	16	11	0	11
60	8. 5.40	—	60	P	—	13	12	0	12
99	2. 1.42	—	69	P	—	12	3	3	6
100	13. 1.42	—	54	P	—	12	4	1	5
108	30.11.42	100.8	75	P	—	15	12	0	12
		102.6							
111	6. 12.42	102.2	69	P	—	16	9	0	9
		103.0							
116	28.11.42	101.8	84	P	—	13	11	1	12
118	14. 12.42	102.8	54	P	—	12	8	3	11
		103.4							
145	6. 11.42	—	84	P	—	10	3	0	3
GROUP 5.—48 HOUR PERIOD.									
34	7. 9.42	101.0	60	—	N	—	—	—	—
34	6. 10.42	—	72	P	—	18	9	1	10
50	11. 6.41	—	66	P	—	15	6	1	7
108	17.10.42	—	72	—	N	—	—	—	—
108	9. 11.42	—	63	—	N	—	—	—	—
123	29. 11.42	101.6	51	—	N	—	—	—	—
125	25. 6.42	102.5	75	—	N	—	—	—	—
125	6. 8.42	102.0	60	P	—	12	10	1	11
129	11. 1.43	102.4	75	P	—	10	6	2	8
		103.2							
130	29. 8.42	—	69	P	—	10	9	0	9
134	6. 3.43	102.2	63	P	—	14	12	0	12
		102.6							
138	10. 9.42	103.1	66	—	N	—	—	—	—
153	2. 3.43	101.7	69	P	—	13	12	1	13
		102.1							
154	28. 2.43	101.4	54	—	N	—	—	—	—
		102.2							
157	3. 3.43	101.7	66	—	N	—	—	—	—
		102.0							
161	25. 4.43	101.8	87	P	—	15	12	1	13
		102.4							
178	17. 6.43	101.0	78	P	—	14	5	2	7
		102.2							
156	8. 4.43	102.0	72	P	—	11	1	5	6
		102.8							

TABLE I (Continued).
Large Blacks.

Sow No.	Date of Service.	Temperature of Sow F.	Duration of Oestrus (Hours.)	RESULT.		No. of C.L.	NO. OF FOETUSES.		
				Positive. (P)	Negative. (N).		Alive.	Atrophic.	Total.
GROUP 6.—60 HOUR, 54 HOUR, OR WANING OESTRUS PERIOD.									
145	15. 10. 42	—	69	—	N	—	—	—	—
156	11. 3. 43	101.5 102.0	72	—	N	—	—	—	—
157	10. 2. 43	104.0 104.5	75	—	N	—	—	—	—
160	10. 3. 43	102.4 103.0	72	P	—	11	9	0	9
163	28. 5. 43	—	60	—	N	—	—	—	—
163	20. 6. 43	100.8	63	—	N	—	—	—	—
163	11. 7. 43	102.2	66	—	N	—	—	—	—
164	26. 5. 43	—	66	P	—	10	1	2	3
166	3. 6. 43	—	72	—	N	—	—	—	—
166	25. 6. 43	—	78	—	N	—	—	—	—
166	16. 7. 43	101.0	63	—	N	—	—	—	—
170	11. 3. 43	102.4	75	—	N	—	—	—	—
170	9. 4. 43	102.6 103.6	87	P	—	14	13	0	13
171	28. 5. 43	—	81	—	N	—	—	—	—
171	18. 6. 43	101.8 102.6	75	—	N	—	—	—	—
171	9. 7. 43	101.2 102.0	93	—	N	—	—	—	—
176	27. 4. 43	—	69	—	N	—	—	—	—
176	9. 6. 43	101.2 102.4	69	—	N	—	—	—	—
178	24. 5. 43	—	60	—	N	—	—	—	—
179	27. 5. 43	—	69	P	—	12	2	4	6
180	8. 7. 43	101.6 102.2	60	—	N	—	—	—	—
182	13. 6. 43	102.0 102.8	63	—	N	—	—	—	—
182	4. 7. 43	103.0 103.6	69	—	N	—	—	—	—
182	25. 7. 43	102.8	60	—	N	—	—	—	—
186	14. 6. 43	102.0 103.0	66	—	N	—	—	—	—
188	19. 7. 43	102.0	69	—	N	—	—	—	—
193	11. 7. 43	102.2 103.2	57	—	N	—	—	—	—
193	31. 7. 43	101.8	60	—	N	—	—	—	—
195	16. 7. 43	100.4	66	—	N	—	—	—	—
199	27. 5. 43	—	60	—	N	—	—	—	—
199	17. 6. 43	103.4	72	—	N	—	—	—	—
199	8. 7. 43	102.2	69	—	N	—	—	—	—
201	15. 7. 43	101.5	60	—	N	—	—	—	—
201	4. 8. 43	—	63	—	N	—	—	—	—
206	20. 7. 43	102.2	63	—	N	—	—	—	—
211	23. 7. 43	101.4	63	—	N	—	—	—	—
215	13. 7. 43	102.6	57	—	N	—	—	—	—
215	2. 8. 43	103.2	66	P	—	12	13	—	13

SEX PHYSIOLOGY OF PIGS.

TABLE I (Continued).
Large Blacks (Continued).

Sow No.	Date of Service.	Temperature of Sow F.	Duration of Oestrus (Hours.)	RESULT.		No. of C.L.	NO. OF FOETUSES.		
				Positive. (P)	Negative. (N)		Alive.	Atrophic.	Total.
217	20. 7.43	103·0	57	—	N	—	—	—	—
211	23. 7.43	102·4	60	—	NN	—	—	—	—
180	30. 7.43	101·8	54	—	NN	—	—	—	—
180	20. 8.43	102·4	57	—	NN	—	—	—	—
188	9. 8.43	—	63	—	N	—	—	—	—
188	29. 8.43	101·4	66	P	—	13	4	5	9
193	20. 8.43	102·0	72	P	—	17	8	—	8
201	24. 8.43	102·6	159	—	N	—	—	—	—
206	10. 8.43	—	63	—	NN	—	—	—	—
206	31. 8.43	102·2	60	—	NN	—	—	—	—
211	14. 8.43	102·3	66	—	NN	—	—	—	—
211	6. 9.43	101·1	54	—	NN	—	—	—	—
217	9. 8.43	—	54	—	NN	—	—	—	—
217	31. 8.43	103·0	51	—	NN	—	—	—	—
221	13. 8.43	102·8	66	—	N	—	—	—	—
221	4. 9.43	103·4	66	P	—	15	9	3	12

TABLE I (Continued).

Large Whites.

Sow No.	Date of Service.	Temperature of Sow F.	Duration of Oestrus (Hours.)	RESULT.		No. of C.L.	NO. OF FOETUSES.		
				Positive. (P)	Negative. (N).		Alive.	Atrophic.	Total.
GROUP 1.—ZERO HOUR PERIOD.									
68	24. 9.42	101.7	57	P	—	19	14	0	14
69	25. 3.41	—	45	—	N	—	—	—	—
72	22. 3.41	—	60	P	—	22	8	1	9
96	29. 8.42	101.7	45	P	—	18	16	0	16
116	25.11.42	104.0	39	P	—	15	14	0	14
124	21.11.42	—	57	P	—	14	11	1	12
128	20. 8.42	102.7	51	—	N	—	—	—	—
132	2. 10.42	—	33	P	—	19	13	0	13
134	22. 8.42	102.0	42	P	—	14	7	0	7
143	4. 11.42	—	48	P	—	16	15	0	15
147	13.11.42	—	30	P	—	17	11	1	12
149	23.11.42	103.6	39	P	—	12	10	0	10
GROUP 2.—12 HOUR PERIOD.									
18	23. 3.41	—	39	P	—	10	8	0	8
79	16. 5.41	—	33	P	—	19	13	3	16
102	13.10.42	102.6	48	P	—	20	16	0	16
103	10. 8.42	101.8	33	P	—	17	15	2	17
126	25. 8.42	104.5	51	P	—	17	14	1	15
128	16. 9.42	102.6	54	P	—	18	12	1	13
132	22. 8.42	101.4	33	—	N	—	—	—	—
135	15. 9.42	103.0	42	P	—	16	14	0	14
136	15. 9.42	101.8	33	P	—	16	9	0	9
142	16. 9.42	—	33	P	—	17	17	0	17
137	11. 9.42	102.0	42	P	—	14	9	0	9
GROUP 3.—24 HOUR PERIOD.									
65	4. 4.41	—	51	P	—	14	12	1	13
77	3. 5.41	—	48	P	—	14	11	0	11
80	15. 4.41	—	36	P	—	14	3	0	3
82	21. 4.41	—	30	P	—	19	15	0	15
104	29. 9.42	102.6	57	P	—	21	18	0	18
105	26. 5.42	102.3	60	P	—	21	17	1	18
106	21.10.42	—	60	P	—	15	11	0	11
118	2. 6.42	102.4	42	P	—	12	8	0	8
125	24. 8.42	102.3	54	P	—	14	11	0	11
131	21. 8.42	102.4	45	P	—	14	15	0	15
132	13. 9.42	101.8	36	—	N	—	—	—	—
138	24.10.42	—	42	—	N	—	—	—	—
143	13.10.42	—	48	—	N	—	—	—	—

SEX PHYSIOLOGY OF PIGS.

TABLE I (Continued).

Large Whites.

Sow No.	Date of Service.	Temperature of Sow F.	Duration of Oestrus (Hours.)	RESULT.		No. of C.L.	NO. OF FOETUSES.		
				Positive. (P)	Negative. (N).		Alive.	Atrophic.	Total.
GROUP 4.—36 HOUR PERIOD.									
69	22. 4.41	—	51	P	—	17	12	1	13
70	8. 4.41	—	51	P	—	16	9	0	9
71	6. 4.41	—	54	—	N	—	—	—	—
71	26. 4.41	—	48	P	—	18	13	1	14
73	2. 4.41	—	51	P	—	16	13	2	15
76	5. 4.41	—	48	P	—	21	7	4	11
77	13. 4.41	—	51	—	N	—	—	—	—
98	26. 1.42	102.4	66	P	—	14	13	1	14
101	2.12.42	103.0	54	P	—	21	16	0	16
		103.6							
118	15. 5.42	101.0	36	—	N	—	—	—	—
123	24. 9.42	102.0	60	P	—	18	4	2	6
138	2.12.42	101.4	42	P	—	15	5	4	9
146	10.12.42	103.4	54	P	—	15	5	0	5
		103.8							
150	24.11.42	102.8	51	—	N	—	—	—	—
154	13.12.42	105.2	57	—	N	—	—	—	—
GROUP 5.—48 HOUR OR WANING OESTROUS PERIOD.									
76	16. 3.41	—	51	—	N	—	—	—	—
122	1. 7.42	103.7	72	P	—	*	*	*	*
145	17. 8.43	102.8	45	—	N	—	—	—	—
155	6. 3.43	102.6	69	P	—	*	*	*	*
		103.2							
170	13. 7.43	102.6	36	P	—	*	*	*	*
180	25. 5.43	—	57	P	—	15	3	0	3
182	27. 6.43	—	45	—	N	—	—	—	—
182	16. 7.43	101.0	39	—	N	—	—	—	—
182	14. 8.43	100.0	48	—	N	—	—	—	—
183	21. 6.43	—	96	—	N	—	—	—	—
185	21. 7.43	102.8	51	—	N	—	—	—	—
185	12. 8.43	101.0	54	—	N	—	—	—	—
187	22. 8.43	102.4	60	—	N	—	—	—	—
188	5. 9.43	102.0	39	—	N	—	—	—	—
190	14. 8.43	101.8	27	—	N	—	—	—	—
191	18. 8.43	102.6	36	—	N	—	—	—	—
191	6. 9.43	102.0	39	—	N	—	—	—	—
193	18. 8.43	103.0	36	—	N	—	—	—	—
193	6. 9.43	102.0	39	—	N	—	—	—	—
195	16. 8.43	102.6	36	—	N	—	—	—	—
195	5. 9.43	102.8	33	—	N	—	—	—	—
198	15. 8.43	103.0	42	P	—	*	*	*	*

* Not slaughtered.

TABLE II.

The Total and Atrophic Number of Embryos at About 26 Days of Pregnancy Occurring as a Result of Services Allowed at Different Intervals During Oestrus.

SERVICE PERIOD AFTER ONSET OF OESTRUS—HOURS.											
0		12		24		36		48		60	
Total (T) and Atrophic (A) number of foetuses.											
T	A	T	A	T	A	T	A	T	A	T	A
LARGE BLACKS.											
6	0	10	2	10	0	12	1	7	1	9	0
8	0	13	2	7	0	6	3	11	1	13	0
5	2	12	0	2	2	5	1	9	0	3	2
16	1	13	1	7	1	11	1	10	1	6	4
12	0	9	0	4	0	11	0	8	2	8	7
8	2	8	1	8	2	3	0	13	1	8	0
13	0	11	2	9	1	12	1	12	0	9	5
14	0	10	4	13	0	12	0	6	5	12	3
9	0	11	0	13	1	9	0	13	1	—	—
2	1	12	0	8	2	11	3	7	2	—	—
93	6	109	12	81	9	92	10	96	14	68	21
LARGE WHITES.											
9	1	8	0	13	1	15	2	—	—	—	—
7	0	17	2	3	0	11	4	—	—	—	—
16	0	15	1	16	1	9	1	—	—	—	—
14	0	9	0	12	1	13	1	—	—	—	—
13	0	14	0	18	2	14	1	—	—	—	—
15	0	17	0	8	0	14	1	—	—	—	—
12	1	13	1	15	0	6	2	—	—	—	—
12	1	9	0	11	0	9	4	—	—	—	—
10	0	16	0	18	0	16	0	—	—	—	—
14	0	16	4	11	0	5	0	—	—	—	—
122	3	134	8	125	5	112	16	—	—	—	—

TABLE III.

The Number of Corpora Lutea in Large Black and Large White Pigs of Different Ages.

AGE IN MONTHS.

7-8.		9.		10.		11-13.		14-16.		17-57	
BREED.											
L.B.	L.W.	L.B.	L.W.	L.B.	L.W.	L.B.	L.W.	L.B.	L.W.	L.B.	L.W.
11	16	12	22	12	16	11	10	13	12	15	21
14	21	12	15	10	18	14	13	11	20	10	20
11	14	10	17	14	19	12	17	15	21	23	17
11	14	10	12	12	16	16	21	14	15	15	20
13	17	12	20	14	19	15	18	12	15	10	17
11	18	11	14	6	18	14	15	16	16	16	14
14	17	14	16	15	19	13	17	17	14	11	19
13	15	15	16	12	17	13	28	16	11	19	21
10	18	15	14	9	18	12	23	16	18	18	21
13	19	15	16	10	21	11	17	10	18	11	15
13	15	12	18	10	10	18	12	14	14	16	18
15	13	9	24	10	18	13	18	13	—	13	20
9	—	10	14	22	16	16	17	18	—	16	—
12	—	16	15	14	16	14	—	—	—	13	—
—	—	17	17	13	11	12	—	—	—	12	—
—	—	18	15	12	13	18	—	—	—	13	—
—	—	—	18	10	—	12	—	—	—	14	—
—	—	—	16	9	—	14	—	—	—	14	—
—	—	—	14	15	—	15	—	—	—	12	—
—	—	—	19	15	—	13	—	—	—	14	—
—	—	—	14	18	—	17	—	—	—	16	—
—	—	—	14	16	—	15	—	—	—	24	—
—	—	—	14	—	—	11	—	—	—	18	—
—	—	—	14	—	—	13	—	—	—	—	—
—	—	—	14	—	—	—	—	—	—	—	—
—	—	—	16	—	—	—	—	—	—	—	—

TABLE IV.

The Number of Ova Produced at Two Consecutive Ovulations as Indicated by the Number of Corpora Lutea I and Mature Follicles.

LARGE BLACKS.			LARGE WHITES.		
Sow No.	No. of C.L.I. or Follicles at Ovulation.		Sow No.	No. of C.L.I. or Follicles at Ovulation.	
	No. 1.	No. 2.		No. 1.	No. 2.
11	15	10	17a	21	21
12	23	15	21	18	20
13	12	14	23	19	17
19	11	19	32	29	20
21	13	11	33	17	17
22	12	10	36	23	14
23	24	8	47	15	17
63	11	18	49	20	23
98	14	11	50	16	21
B171	14	14	54	18	12
A171	15	25	56	20	19
180	16	15	57	18	19
182	14	12	59	39	15
183	18	12	66	11	18
186	14	15	67	15	28
194	12	10	119	18	18
195	12	13	121	22	16
199	9	15	140	14	11
201	11	13	145	26	26
211	14	13	150	16	18
218	13	12	157	16	15
—	—	—	159	19	14
—	—	—	165B	19	20
—	—	—	165A	20	11
—	—	—	166	13	7
—	—	—	167	14	16
—	—	—	175	21	14
—	—	—	182	21	19
—	—	—	183	23	20
—	—	—	185	18	17
—	—	—	187	17	16
—	—	—	188	16	16
—	—	—	189	14	16
—	—	—	190	18	24
—	—	—	191	15	14
—	—	—	193	15	17
—	—	—	195	18	16
—	—	—	438	20	21

SEX PHYSIOLOGY OF PIGS.

TABLE V.

Temperature (°F.) of Large Black and Large White Pigs at Six-hourly Intervals Over the 24 Hours of the Day.

6.01 p.m.-12 m.n.		12.01-6.00 a.m.		6.01 a.m.-12 N.		12.01-6.00 p.m.	
L.B.	L.W.	L.B.	L.W.	L.B.	L.W.	L.B.	L.W.
101.6	102.6	102.2	102.8	102.6	101.7	102.2	104.0
102.8	102.3	101.6	102.8	102.6	101.7	103.2	102.7
103.6	102.3	101.6	102.4	102.8	102.0	101.2	103.6
103.0	101.8	102.4	102.6	101.0	102.0	101.8	101.8
102.2	103.0	100.8	103.0	101.8	102.4	101.2	104.5
102.8	103.7	102.6	—	101.0	102.4	100.8	102.6
102.8	101.0	103.0	—	102.0	101.0	101.8	101.4
102.8	102.6	102.8	—	101.7	101.4	102.8	103.0
102.9	—	102.2	—	101.0	105.2	102.0	101.8
102.2	—	—	—	102.5	100.0	103.1	102.6
102.4	—	—	—	101.4	101.8	101.7	102.4
102.2	—	—	—	101.8	102.0	101.5	102.0
101.7	—	—	—	101.0	102.0	101.0	103.4
104.0	—	—	—	102.0	103.0	101.2	102.6
102.2	—	—	—	101.2	102.8	100.4	102.6
102.4	—	—	—	101.6	—	102.2	102.8
101.8	—	—	—	102.0	—	102.6	101.0
102.0	—	—	—	102.0	—	101.8	—
101.8	—	—	—	101.4	—	102.4	—
103.4	—	—	—	103.0	—	102.2	—
101.5	—	—	—	102.4	—	103.4	—
102.2	—	—	—	102.6	—	—	—
103.2	—	—	—	101.1	—	—	—
101.4	—	—	—	103.0	—	—	—
102.0	—	—	—	102.8	—	—	—
102.3	—	—	—	—	—	—	—
102.0	—	—	—	—	—	—	—

APPENDIX 7.

OBSERVATION 7.

The Deposition of Semen by the Boar in the Genital Tract of the Sow During Coitus.

In order to determine in which compartment of the genital tract semen is deposited by the boar during coitus, four sows were served when in oestrus and killed immediately after service. The different compartments of the genitalia were separated by tying off firmly with twine. This occurred within 5 minutes after killing. The results are reported below.

1. *Large Black Gilt No. 58.*

She was mated on 11.10.41 to Large Black boar U. 88. Coitus lasted 10 minutes. No wastage of semen occurred. Both cornua were found to contain semen over their entire lengths. On being "milked" 43 c.c. of semen were obtained from the one cornu alone. On sectioning the cervix, an unbroken gelatinous plug (bouchon vaginal) was exposed, firmly lodged between the rugae, measuring 16 x 2.5 cm. The cervix was 20 cm. long. Scrapings from the walls of the fallopian tubes were not examined microscopically for the presence of spermatozoa.

2. *Large Black Gilt No. 56.*

This gilt was mated to Large Black boar U. 88 on 7.10.41. The duration of coitus was 3 minutes. A considerable quantity of the ejaculate, including the gelatinous fraction, was wasted during service.

Thorough "milking" of the two cornua produced only 13 c.c. of semen from the one side and 18 c.c. from the other, or a total of 31 c.c. No gelatinous plug was present in the cervix. The length of the cervix was 26 cm. and that of the vagina 8.5 cm. The tubes were not examined for the presence of spermatozoa.

3. *Large Black Gilt No. 62.*

She was mated on 10.10.41 to Large White boar P. 64. Service lasted 6 minutes. Considerable wastage of semen, including the gelatinous fraction occurred. On being thoroughly "milked", the one cornu yielded 23 c.c. of semen and the other 9 c.c., that is a total of 32 c.c. Scrapings from the ovarian extremities of the fallopian tubes were examined under the microscope, revealing numerous motile spermatozoa. A gelatinous plug was found, broken in two portions, one section in the vagina, measuring 3.5 cm., and one section in the cervix, measuring 5.5 cm. The length of the vagina was 6 cm. and that of the cervix 30 cm.

4. *Large Black Gilt No. 102.*

She was mated on 27.3.42 to Large White boar P.64. Coitus lasted 3 minutes 30 seconds. There was no wastage of semen. Both cornua were distended with semen, the one yielding 105 c.c. and the other 112 c.c. on being "milked", that is a total of 217 c.c. Microscopic examination of scrapings from the walls of the fallopian tubes revealed the presence of motile spermatozoa at the ovarian extremities thereof. The cervix contained an intact gelatinous plug, which measured 14 x 2½ cm. (vide Photo No. 7).

TABLE I (Continued).

Service Date.	Interval in Days.	DURATION OF COITUS.		Service Date.	Interval in Days.	DURATION OF COITUS.	
		Min.	Secs.			Min.	Secs.
LARGE BLACK U. 32 (contd.)				LARGE BLACK U. 88 (contd.)			
4. 3.41	12	8	50	11. 1.42	8	4	0
6. 3.41	2	5	37	13. 1.42	2	3	10
5. 5.41	60	5	35	16. 1.42	3	2	40
8. 5.41	3	6	15	19. 1.42	3	4	40
16. 5.41	8	6	7	22. 1.42	3	4	40
21. 5.41	5	8	7	7. 2.42	16	7	25
26. 5.41	5	4	50	11. 2.42	4	3	10
28. 5.41	2	9	50	24. 2.42	13	7	35
30. 5.41	2	5	15	26. 2.42	2	4	40
2. 6.41	3	7	35	2. 3.42	4	2	17
6. 6.41	4	5	0	3. 3.42	1	2	48
23. 6.41	17	8	5	5. 3.42	2	10	37
28. 6.41	5	9	55	8. 3.42	3	5	15
LARGE BLACK U. 48.				19. 3.42	11	8	30
17. 11.40	—	—	—	25. 3.42	6	2	35
21. 11.40	4	6	35	30. 3.42	5	2	15
23. 11.40	2	4	40	10. 4.42	11	8	20
9. 12.40	16	6	28	17. 4.42	7	3	0
18. 1.41	40	5	30	21. 4.42	4	2	10
23. 1.41	5	4	10	4. 5.42	13	2	40
30. 1.41	7	3	47	10. 5.42	6	3	45
9. 2.41	10	4	45	19. 5.42	9	3	50
11. 2.41	2	4	0	31. 5.42	12	4	20
26. 3.41	15	3	55	3. 6.42	3	2	15
29. 3.41	3	5	20	5. 6.42	2	4	0
LARGE BLACK U. 88.				10. 6.42	5	2	40
29. 8.41	—	1	50	LARGE BLACK UNIVERS 2105.			
1. 9.41	3	4	50	6. 1.43	—	—	—
10. 9.41	9	—	—	12. 2.43	37	6	5
11. 9.41	1	—	—	11. 3.43	27	6	55
16. 9.41	5	2	45	9. 4.43	29	5	50
19. 9.41	3	3	0	8. 5.43	29	3	5
22. 9.41	3	4	45	18. 5.43	10	3	5
25. 9.41	3	6	5	25. 5.43	7	3	40
28. 9.41	3	6	5	27. 5.43	2	4	30
2. 10.41	4	8	30	10. 6.43	14	6	30
23. 10.41	21	4	20	14. 6.43	4	6	30
10. 11.41	18	3	30	17. 6.43	3	7	10
12. 11.41	2	3	40	18. 6.43	1	5	30
2. 12.41	20	4	39	4. 7.43	16	5	10
18. 12.41	16	2	30	8. 7.43	4	4	45
24. 12.41	6	3	10	11. 7.43	3	6	15
2. 1.42	9	2	0	13. 7.43	2	6	25
3. 1.42	1	4	10	16. 7.43	3	6	50
				19. 7.43	3	7	0
				25. 7.43	6	5	15
				28. 7.43	3	3	3
				2. 8.43	5	10	30

TABLE I (Continued).

Service Date.	Interval in Days.	DURATION OF COITUS.		Service Date.	Interval in Days.	DURATION OF COITUS.	
		Min.	Secs.			Min.	Secs.
LARGE WHITE P. 61 (contd.)				LARGE WHITE P. 64 (contd.)			
3. 5.42	22	4	35	10. 4.42	4	4	35
11. 5.42	8	3	35	13. 4.42	3	5	50
18. 5.42	7	3	40	10. 5.42	27	3	40
23. 6.42	36	5	15	15. 5.42	5	4	15
1. 7.42	8	3	55	26. 5.42	11	2	40
7. 7.42	6	2	30	2. 6.42	7	3	25
6. 8.42	29	—	—	3. 6.42	1	6	25
8. 8.42	2	3	10	10. 7.42	37	4	15
10. 8.42	2	4	40	21. 8.42	42	3	50
19. 8.42	9	—	—	22. 8.42	1	2	0
20. 8.42	1	2	50	24. 8.42	2	5	50
22. 8.42	2	5	20	25. 8.42	1	7	5
15. 9.42	14	4	15	29. 8.42	4	4	6
16. 9.42	1	1	50	8. 9.42	10	5	40
24. 9.42	8	4	20	11. 9.42	3	4	5
29. 9.42	5	4	30	13. 9.42	2	4	55
2. 10.42	3	2	20	15. 9.42	2	5	25
13. 10.42	11	4	0	16. 9.42	1	5	45
24. 10.42	11	3	10	24. 9.42	8	4	10
13. 11.42	20	5	30	13. 10.42	19	6	4
19. 11.42	6	1	50	21. 10.42	8	3	30
21. 11.42	2	4	30	4. 11.42	14	4	15
23. 11.42	2	2	55	24. 11.42	20	3	15
24. 11.42	1	3	15	25. 11.42	1	2	10
2. 12.42	8	3	55	14. 12.42	19	4	10
2. 12.42	0	2	45	14. 12.42	0	—	—
10. 12.42	8	4	45	15. 12.42	1	3	15
11. 12.42	1	2	15	17. 12.42	2	2	15
13. 12.42	2	2	50	7. 1.43	21	5	4
14. 12.42	1	2	35	18. 1.43	11	3	45
15. 12.42	1	3	15	25. 1.43	7	3	45
30. 12.42	15	1	40	6. 3.43	30	3	10
22. 2.43	54	3	45	9. 4.43	34	2	50
31. 7.43	159	1	50	25. 5.43	46	2	50
12. 8.43	12	2	40	27. 6.43	33	3	0
14. 8.43	2	2	5	13. 7.43	—	6	10
16. 8.43	2	2	50	21. 7.43	8	2	40
18. 8.43	2	2	50	14. 8.43	24	6	40
22. 8.43	4	3	10	15. 8.43	1	3	0
5. 9.43	14	5	20	17. 8.43	2	2	50
6. 9.43	1	3	15	18. 8.43	1	2	10
9. 9.43	3	5	30	19. 8.43	1	5	15
				24. 8.43	5	5	10
				29. 8.43	5	6	0
				5. 9.43	7	3	15
				6. 9.43	1	5	30
				8. 9.43	2	2	0
LARGE WHITE P. 64.				LARGE WHITE P. 65.			
21. 10.41	—	—	—	3. 2.41	—	4	0
6. 12.41	45	5	20	25. 3.41	50	2	20
11. 3.42	91	1	25	5. 4.41	11	5	50
13. 3.42	2	6	30	21. 4.41	16	6	25
13. 3.42	0	5	47				
6. 4.42	24	9	30				

SEX PHYSIOLOGY OF PIGS.

TABLE I (Continued).

Service Date.	Interval in Days.	DURATION OF COITUS.		Service Date.	Interval in Days.	DURATION OF COITUS.	
		Min.	Secs.			Min.	Secs.
LARGE WHITE P. 145.				LARGE WHITE BENMORE FOUNDER.			
21. 6.43	—	4	0	22. 3.41	—	1	25
25. 6.43	4	2	0	29. 3.41	7	4	30
10. 7.43	15	5	8	2. 4.41	4	4	15
16. 7.43	6	3	0	4. 4.41	2	3	35
14. 8.43	29	3	10	6. 4.41	2	5	10
LARGE WHITE: DU PREEZ.				8. 4.41	2	4	50
10. 3.41	—	6	38	13. 4.41	5	4	5
14. 3.41	4	4	45	22. 4.41	9	6	10
16. 3.41	2	8	35	26. 4.41	4	5	20
19. 3.41	3	5	34	8. 5.41	12	6	12
21. 3.41	2	2	10	29. 5.41	21	7	40
5. 4.41	15	6	10	20. 8.41	83	3	30
15. 4.41	10	4	10	28. 8.41	8	3	13
3. 5.41	18	4	30	2. 9.41	5	6	50
8. 5.41	5	6	9	18. 9.41	16	6	5
16. 5.41	8	7	0	24. 9.41	6	5	5
				31.10.41	37	4	45
				26. 1.42	68	4	47
				31. 1.42	5	4	55

TABLE II (Continued).

Pig No.	No. of C.L.	Pig No.	No. of C.L.
Group 4. Boar Du Preez.		Group 6. Boar P. 64.	
101	21	148	17
102	20	149	12
103	17	150	16
104	21	152	17
105	21	154	20
106	15	165	20
119	18	166	13
121	22	167	14
122	18	175	14
123	18	157	16
124	14	159	19
Group 5. Boar P. 61.		188	16
170	14	189	17
185	18	190	18
187	17	191	15
178	16	194	14
180	15	196	15
182	21	198	13
183	23	193	15
		195	18