1975

4-H LEADERSHIP CONFERENCE

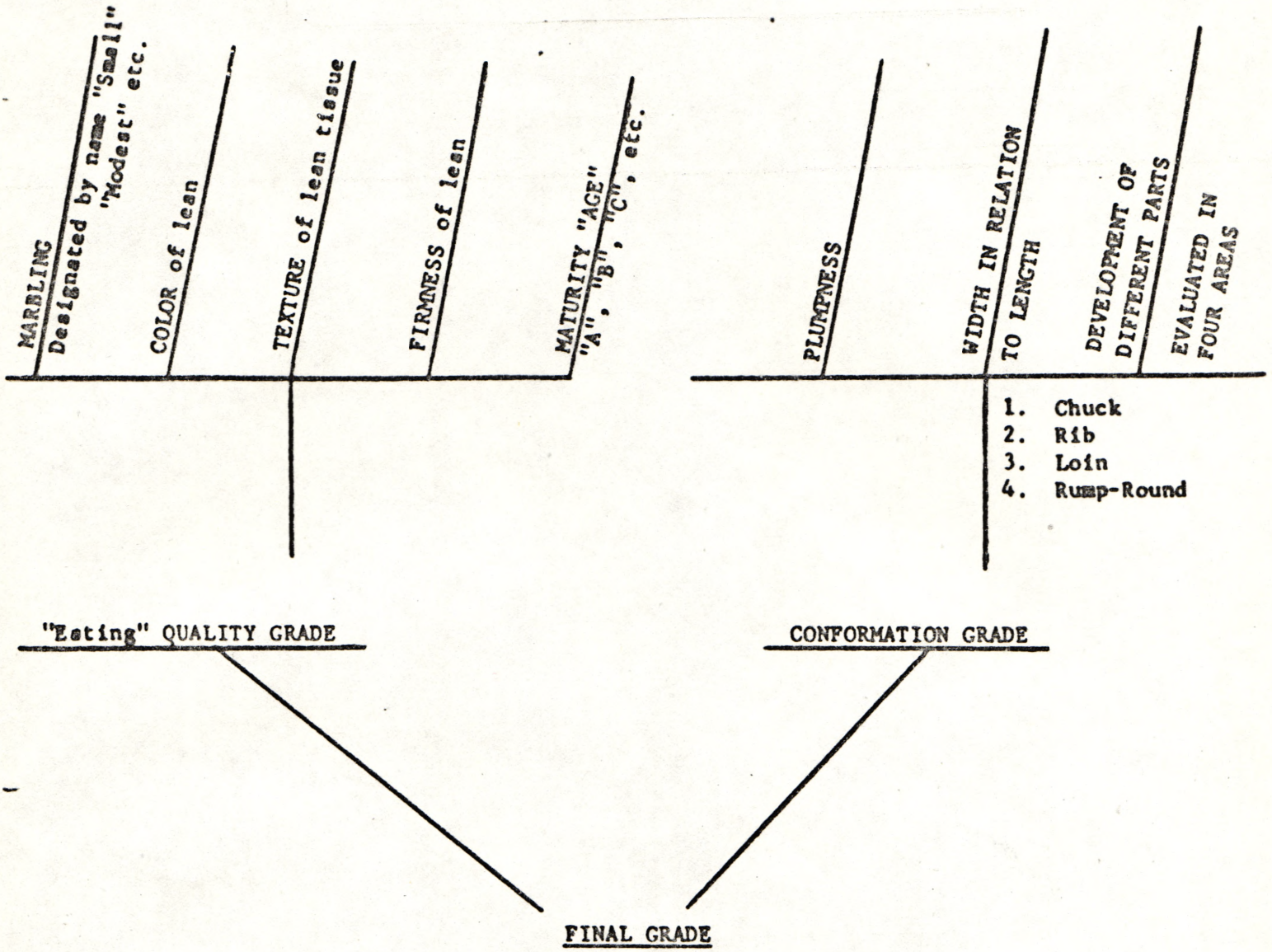
University of California

at

Santa Barbara

Beef Project

Beef Carcass Material

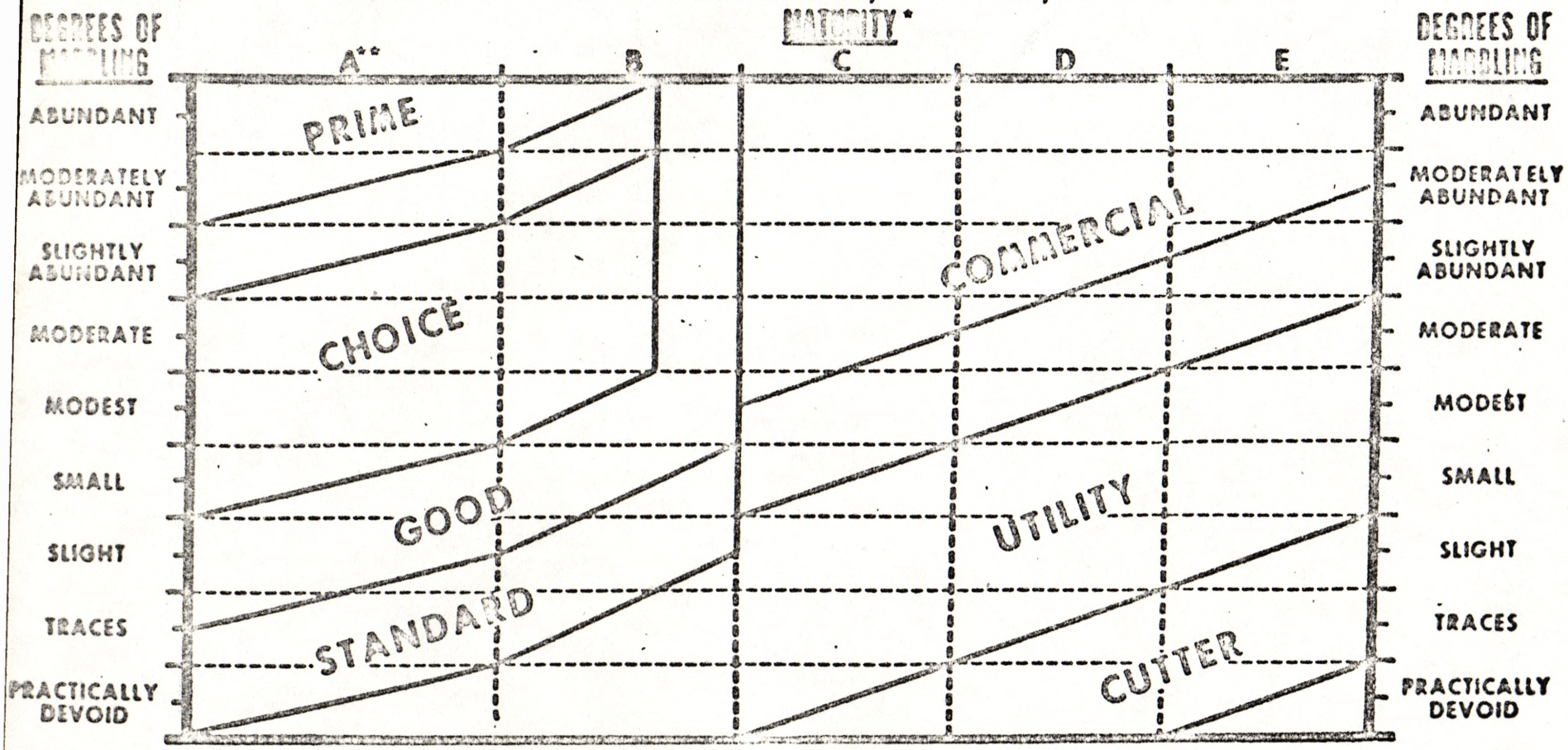


A. Adjustments must be made for differences in conformation.

B. The standards for prime and choice will not allow a carcass to be graded higher than its quality.

Quality		Conformation		Final Grade
Choice	+	Choice	=	Choice
Prime	+	Good	=	Choice
Good	+	Prime	=	Good

RELATIONSHIP BETWEEN MARBLING, MATURITY, AND QUALITY



*Maturity increases from left to right (A through E)

**The A maturity portion of the Figure is the only portion applicable to bullock carcasses.

——Represents midpoint of Prime and Commercial grades.

BEEF CARCASS YIELD GRADES

Yield Grade Designation	Boneless Closely Trimmed Retail Cuts From 4 Primals*	Avg. Retail Cut Out (whole carcass)
No. 1	52.4% and over	82.0%
No. 2	50.1% - 52.3%	77.4%
No. 3	47.8% - 50.0%	72.8%
No. 4	45.5% - 47.7%	68.2%
No. 5	45.4% - or less	63.6%

* Round, loin, rib and chuck

Factors Used to Determine Beef Yield Grade

A. Warm carcass weight (lb.) - obtained from tag on the carcass. Heavier carcasses tend to have higher yield grades (lower cutability).

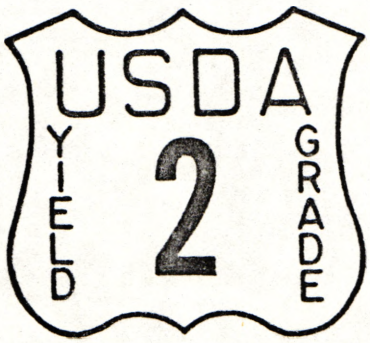
B. Thickness of external fat cover (inches) - measured to nearest 0.1 inch at a point 3/4 the length of the rib eye muscle from the chine bone end. A thicker fat cover reduces cutability.

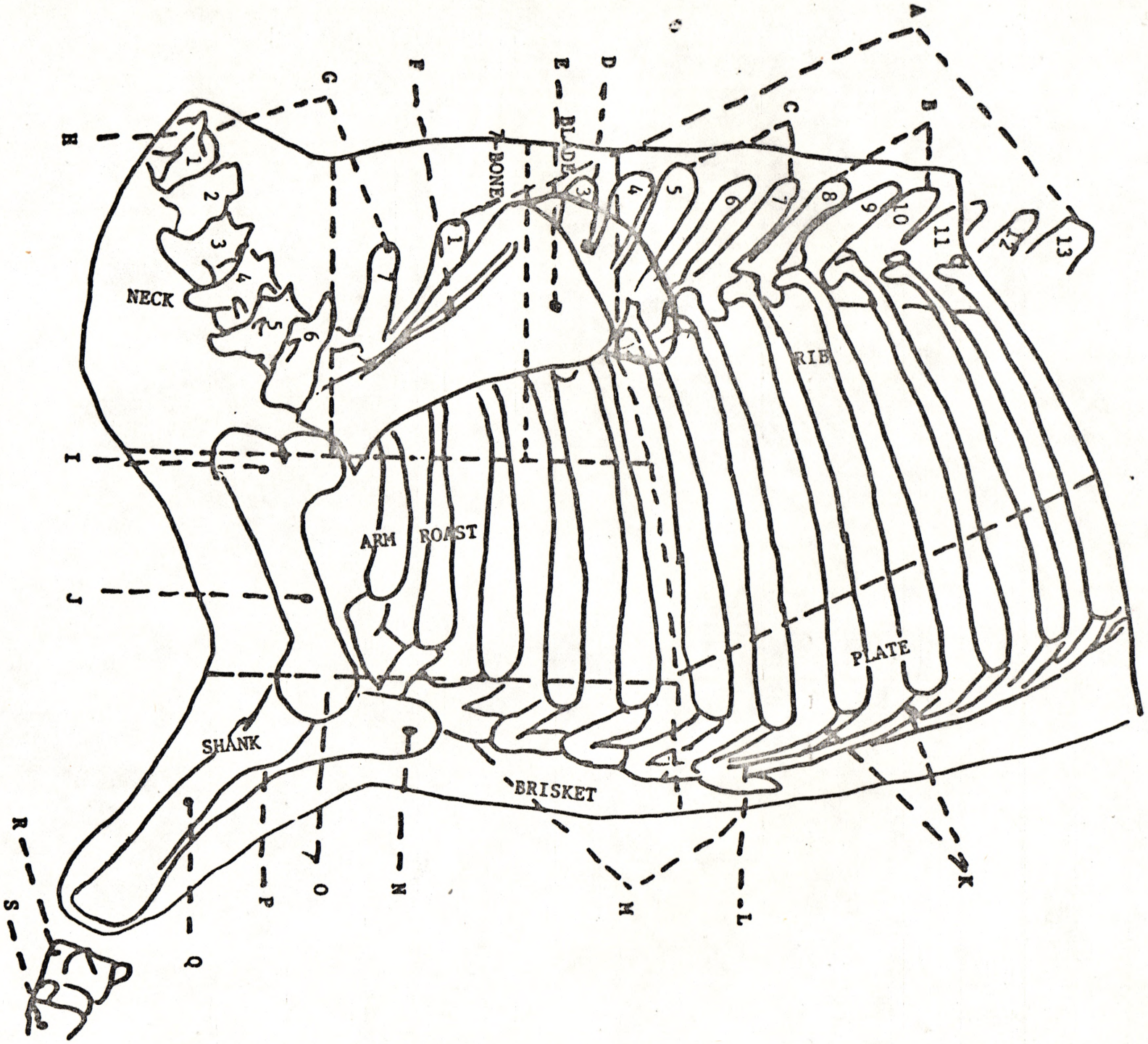
C. Rib eye area (square inches) - measured between the 12th and 13th ribs when the carcass side is ribbed. Only the rib eye muscle, and not the smaller surrounding muscles, should be measured. Area of the rib eye muscle by itself is not a good indicator of carcass leanness because it is closely related to carcass weight.

D. Kidney, pelvic and heart fat (%) - estimated as percentage of carcass wt. to the nearest 0.5. A lower percent is more indicative of higher cutability.

U.S.D.A. Equation for Predictive Beef Yield Grade

Y.G. = 2.5 + 2.5 (fat thickness, in.) + 0.2 (% K.P.H.) + 0.0038 (warm carcass wt., lb) - 0.32 (rib eye area, sq. in.)




NECK
BONE
BLADE
ARM ROAST
RIB
PLATE
SHANK
BRISKET
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S
1
2
3
4
5
6
7
8
9
10
11
12
13

SKELETAL PARTS OF FOREQUARTER

A Thoracic vertebrae, 1-13
B Feather bones
  Spinous processes
C Buttons
  Cartilage of spinous processes
D Blade bone cartilage
  Cartilage of scapula
E Blade bone
  Scapula
F Ridge of blade bone
  Spine of scapula
G Neck bones
  Cervical vertebrae, 1-7
H Atlas
  1st cervical vertebra
I Arm bone knuckle
  Proximal extremity of humerus
J Arm bone
  Humerus
K Rib cartilages
  Costal cartilages
L Tip of breastbone
  Xiphoid cartilage
M Breastbone
  Sternum

ELBOW JOINT
N Olecranon
O Distal extremity of humerus

FORE SHANK BONES
P Ulna
Q Radius

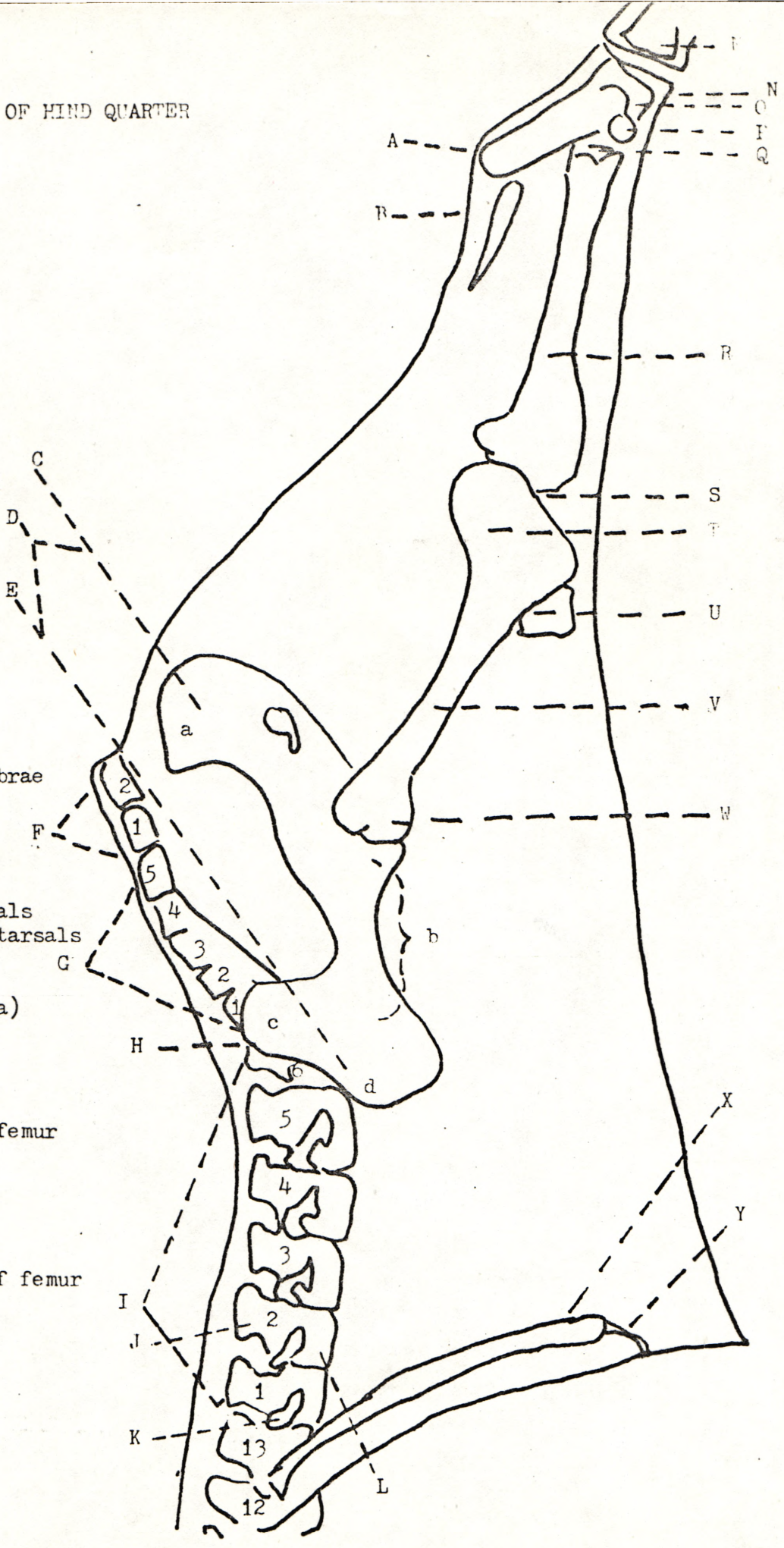
KNEE BONES
R Carpal bones
S Metacarpus

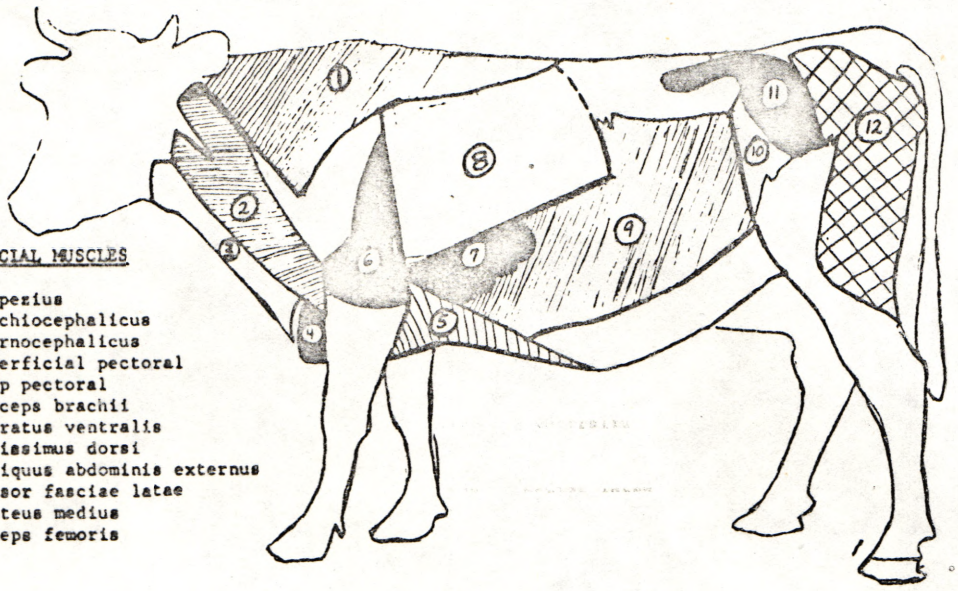
SKELETAL PARTS OF HIND QUARTER

A Tuber calcis
B Achillis tendon
C Aitch Bone
  Ischium
D Pelvic Bone-as coxae
  a) Tuber ischii
  b) Shaft of ilium
  c) Tuber sacrale
  d) Tuber coxae
E Hip Bone
  Ilium
F Tail Bone
  Coccygeal vertebrae, 1-2
G Sacrum
  Sacral vertebrae, 1-5
H Slip Joint
  Sacroiliac joint
I Lumbar vertebrae, 1-6
J Spinous process
K Finger Bone
  Transverse process
L Chine Bone
  Body of lumbar vertebrae
M Metatarsus

HOCK BONES

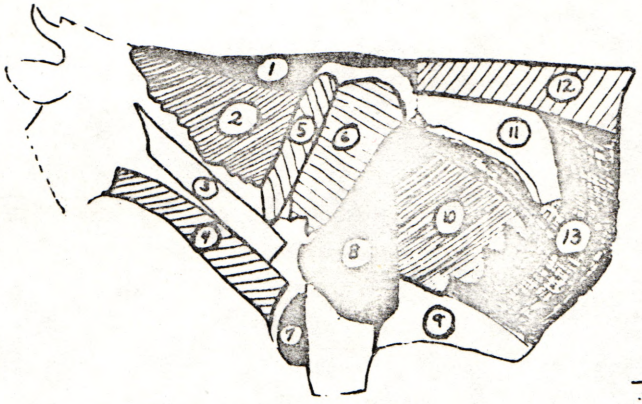
N Fused 2nd and 3rd tarsals
O Fused central and 4th tarsals
P Tibial tarsal bone
Q Lateral malleolus
  (distal end of fibula)
R Hind Shank Bone
  Tibia
S Stifle Joint
T Shank Knuckle Bone
  Distal extremity of femur
U Kneecap
  Patella
V Round Bone
  Femur
W Rump Knuckle Bone
  Proximal extremity of femur
X Rib - 13th
Y Rib Cartilage
  Costal cartilage





SUPERFICIAL MUSCLES

1 Trapezius
2 Brachiocephalicus
3 Sternocephalicus
4 Superficial pectoral
5 Deep pectoral
6 Triceps brachii
7 Serratus ventralis
8 Latissimus dorsi
9 Obliquus abdominis externus
10 Tensor fasciae latae
11 Gluteus medius
12 Biceps femoris

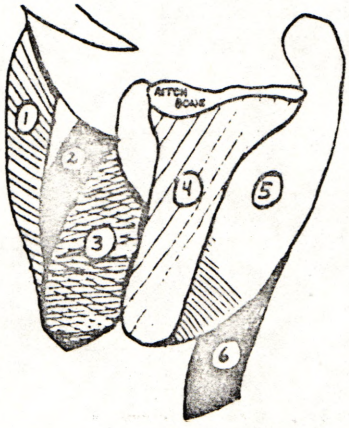


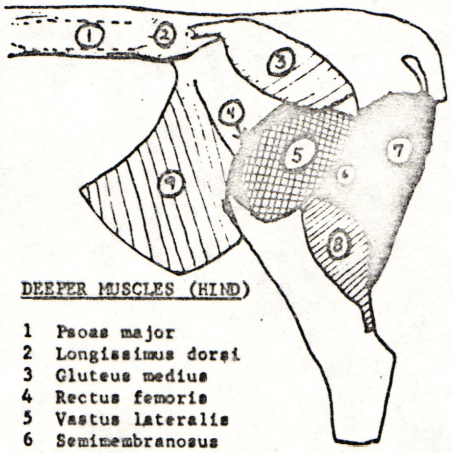
DEEPER MUSCLES (FORE)

1 Rhomboideus
2 Serratus ventralis
3 Cleido-occipitalis
4 Sternocephalicus
5 Supraspinatus
6 Infraspinatus
7 Superficial pectoral
8 Triceps brachii
9 Deep pectoral
10 Serratus ventralis
11 Latissimus dorsi
12 Longissimus dorsi
13 Obliquus abdominis externus

INSIDE ASPECT (HIND)

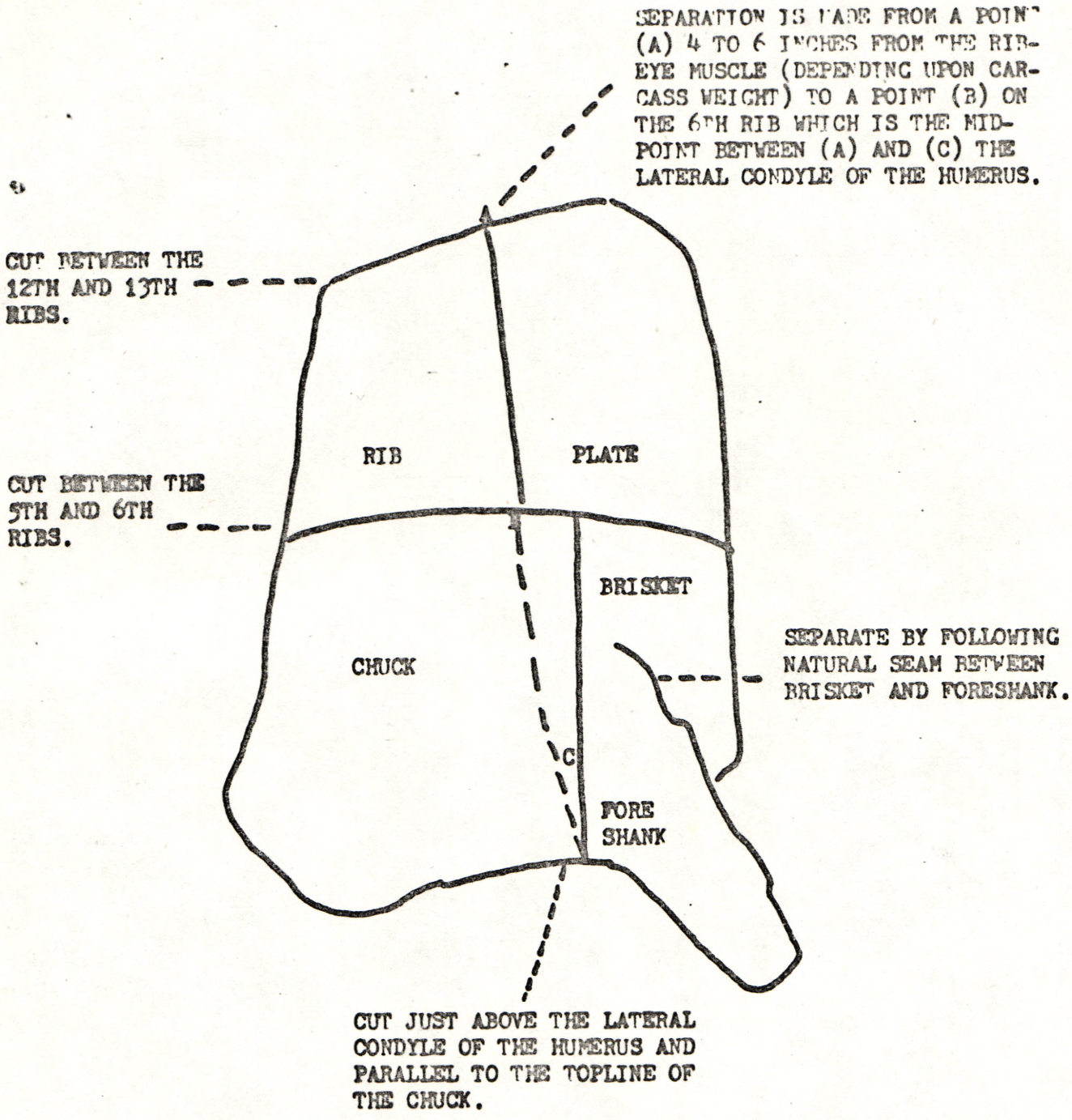
1 Tensor fasciae latae
2 Rectus femoris
3 Vastus medialis
4 Adductor
5 Semimembranosus
6 Semitendinosus

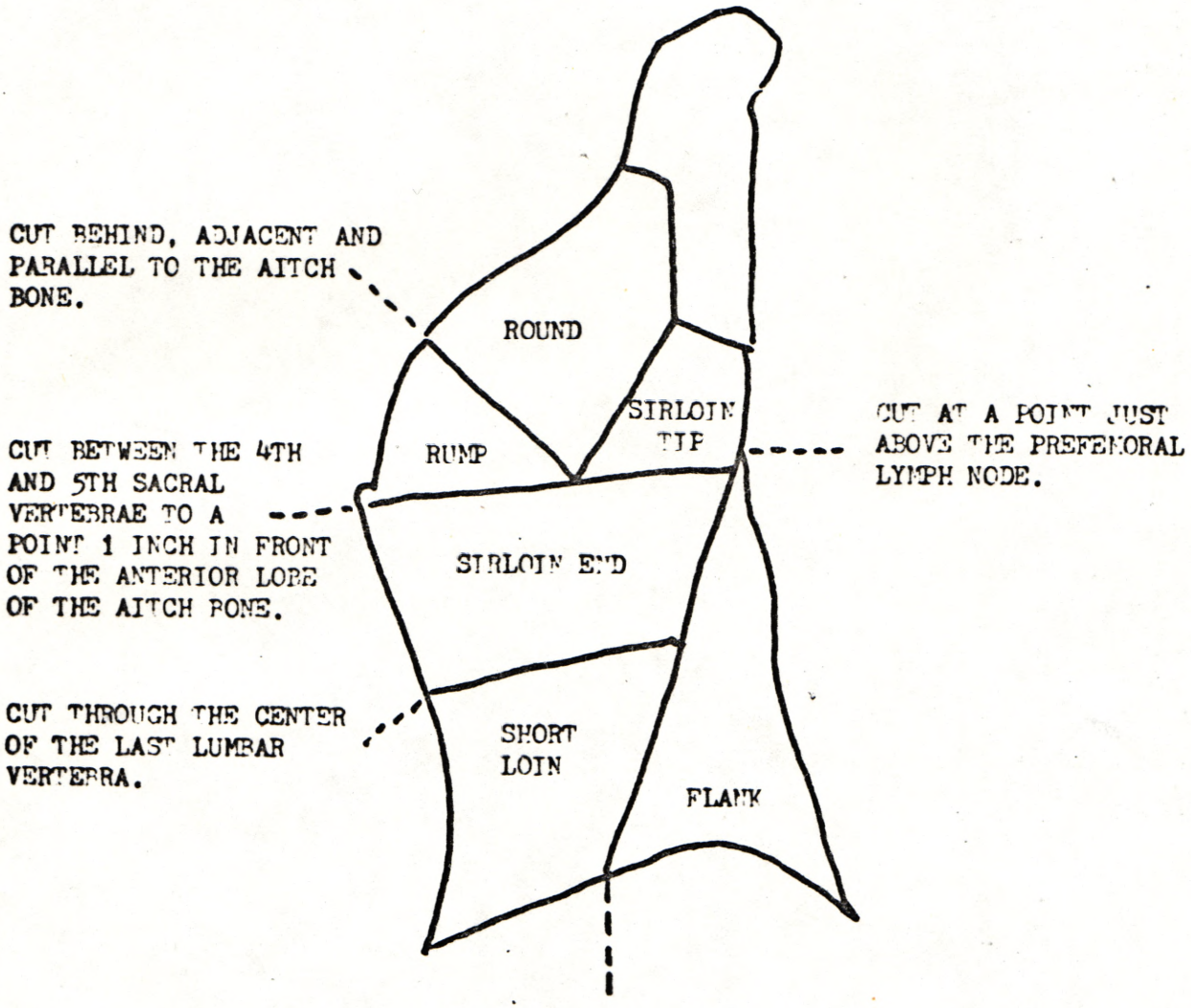


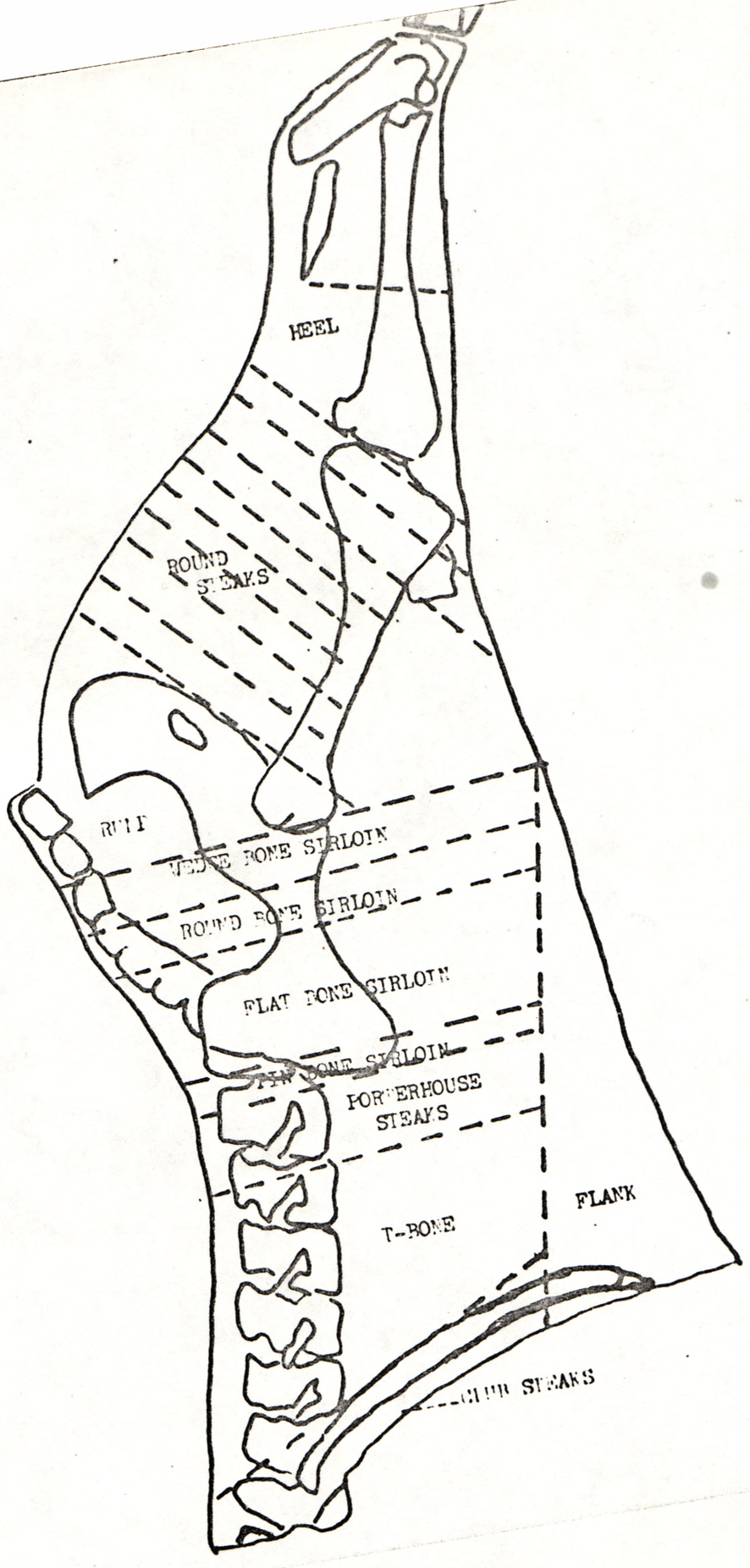


DEEPER MUSCLES (HIND)

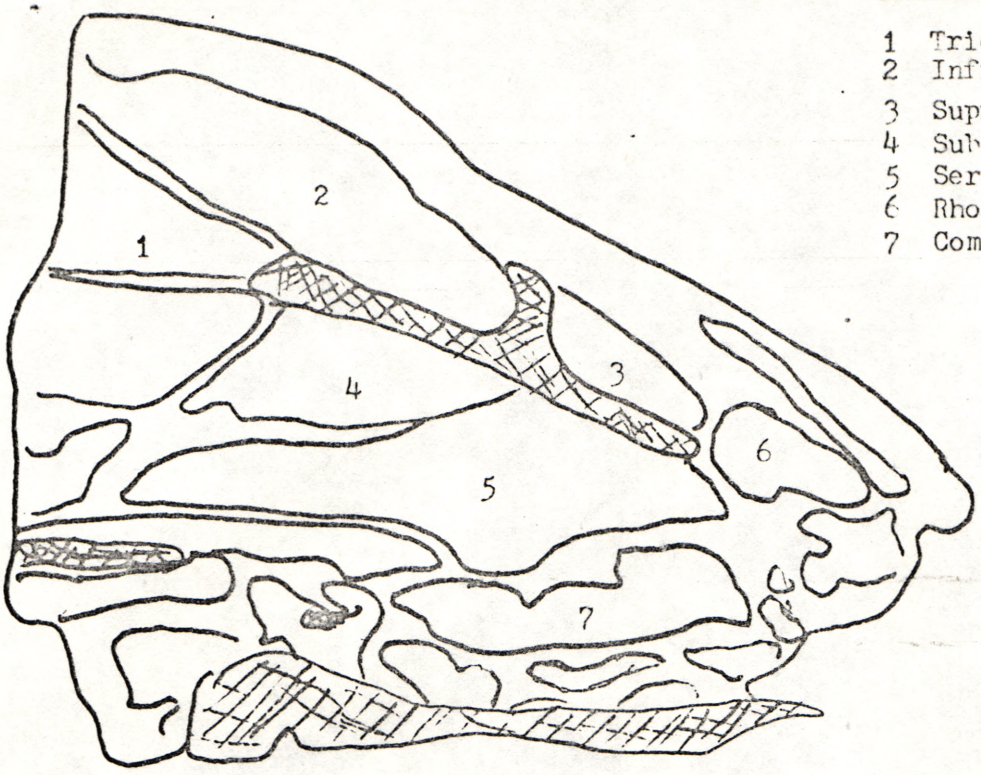
1 Psoas major
2 Longissimus dorsi
3 Gluteus medius
4 Rectus femoris
5 Vastus lateralis
6 Semimembranosus
7 Semitendinosus
8 Gastrocnemius
9 Obliquus abdominis internus


SEPARATION IS MADE FROM A POINT (A) 4 TO 6 INCHES FROM THE RIB-EYE MUSCLE (DEPENDING UPON CARCASS WEIGHT) TO A POINT (B) ON THE 6TH RIB WHICH IS THE MIDPOINT BETWEEN (A) AND (C) THE LATERAL CONDYLE OF THE HUMERUS.
CUT BETWEEN THE 12TH AND 13TH RIBS.
CUT BETWEEN THE 5TH AND 6TH RIBS.
RIB
PLATE
BRISKET
CHUCK
SEPARATE BY FOLLOWING NATURAL SEAM BETWEEN BRISKET AND FORESHANK.
C
FORE SHANK
CUT JUST ABOVE THE LATERAL CONDYLE OF THE HUMERUS AND PARALLEL TO THE TOPLINE OF THE CHUCK.


CUT BEHIND, ADJACENT AND PARALLEL TO THE AITCH BONE.
ROUND
SIRLOIN TIP
CUT AT A POINT JUST ABOVE THE PREFEMORAL LYMPH NODE.
CUT BETWEEN THE 4TH AND 5TH SACRAL VERTEBRAE TO A POINT 1 INCH IN FRONT OF THE ANTERIOR LOBE OF THE AITCH BONE.
RUMP
SIRLOIN END
CUT THROUGH THE CENTER OF THE LAST LUMBAR VERTEBRA.
SHORT LOIN
FLANK
SEPARATION IS MADE AT A POINT 4 TO 6 INCHES FROM THE RIBEYE DEPENDING UPON CARCASS WEIGHT.

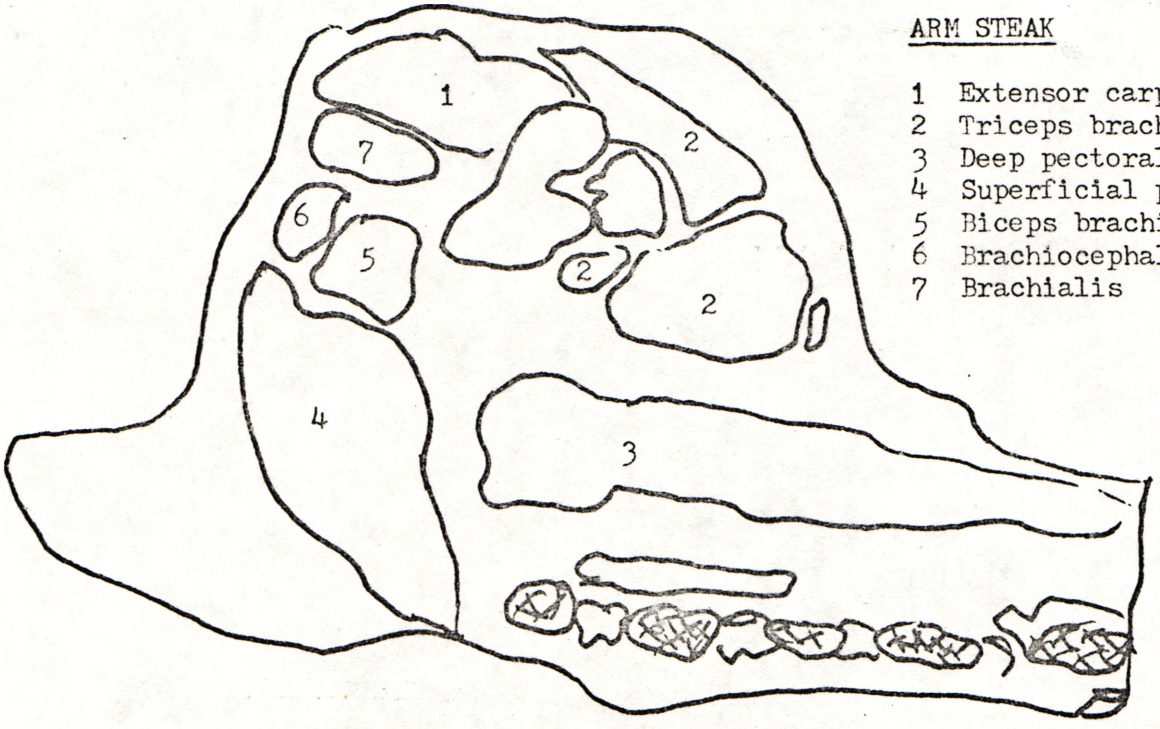

HEEL
ROUND
STEAKS
RUMP
WEDGE BONE SIRLOIN
ROUND BONE SIRLOIN
FLAT BONE SIRLOIN
PORTERHOUSE
STEAKS
T-BONE
FLANK

SEVEN BONE STEAK

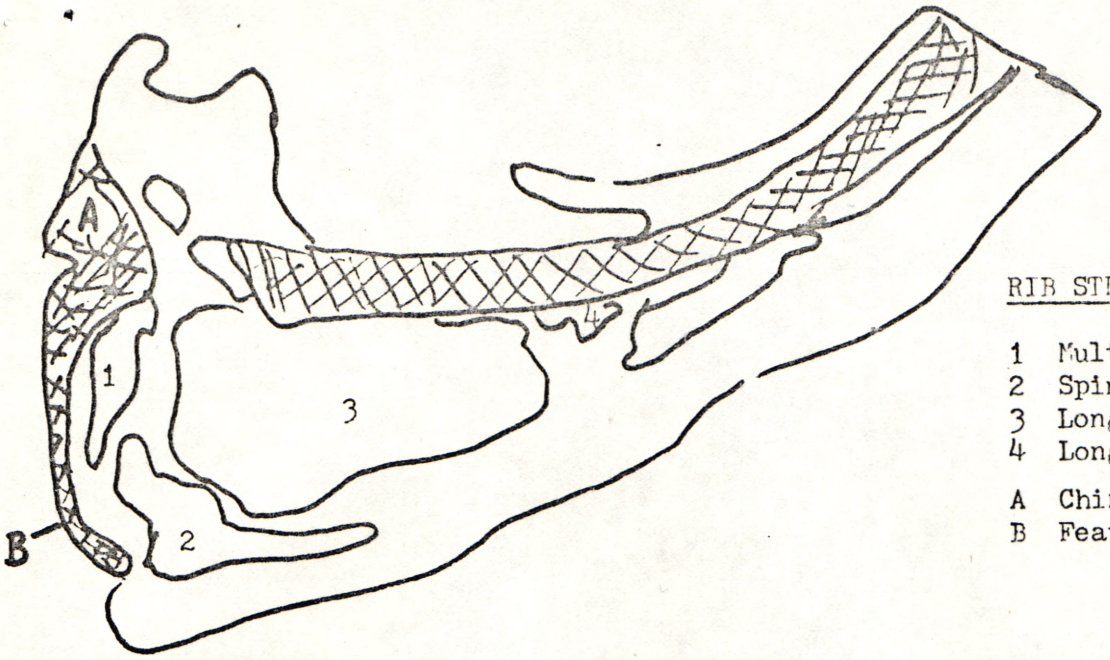


1 Triceps brachii
2 Infraspinatus
3 Supraspinatus
4 Subscapularis
5 Serratus ventralis
6 Rhomboideus
7 Complexus

ARM STEAK



1 Extensor carpi radialis
2 Triceps brachii
3 Deep pectoral
4 Superficial pectoral
5 Biceps brachii
6 Brachiocephalicus
7 Brachialis



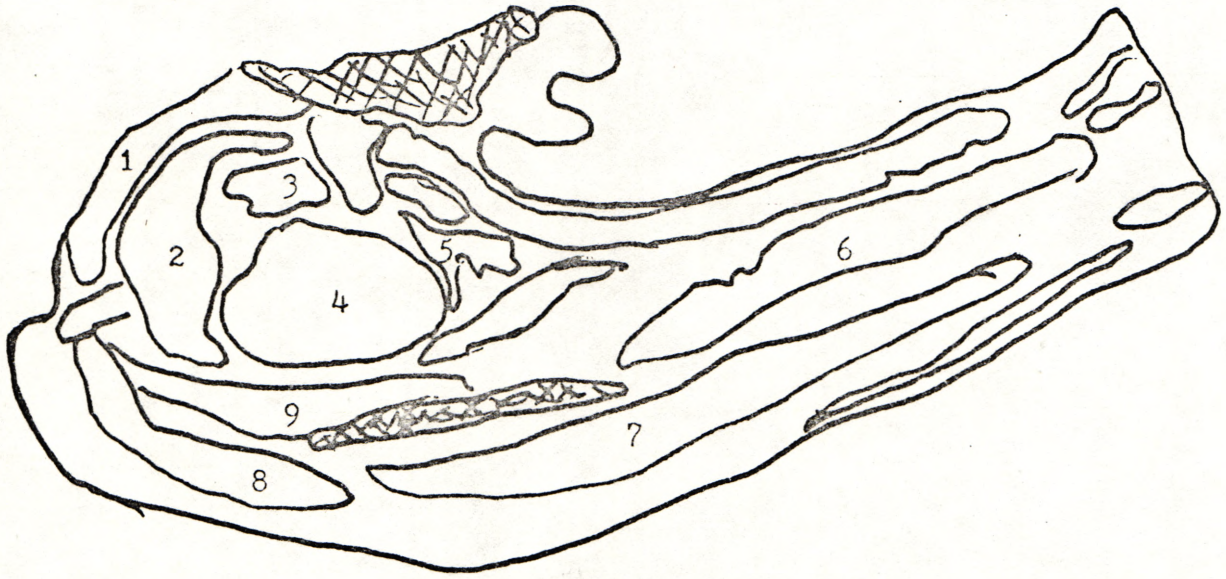
RIB STEAK

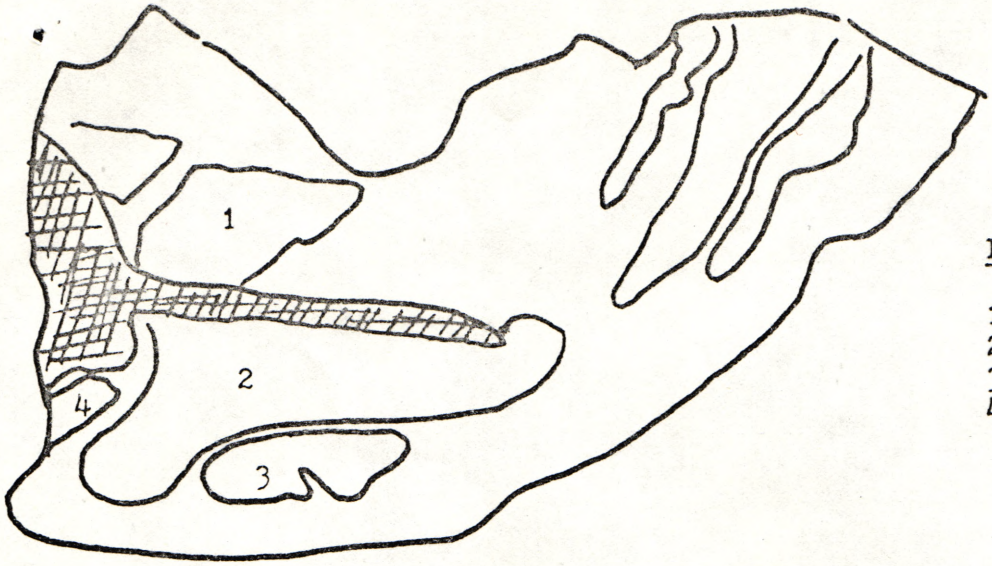
1 Multifidus dorsi
2 Spinalis dorsi
3 Longissimus dorsi
4 Longissimus costarum

A Chime
B Featherbone

BLADE STEAK

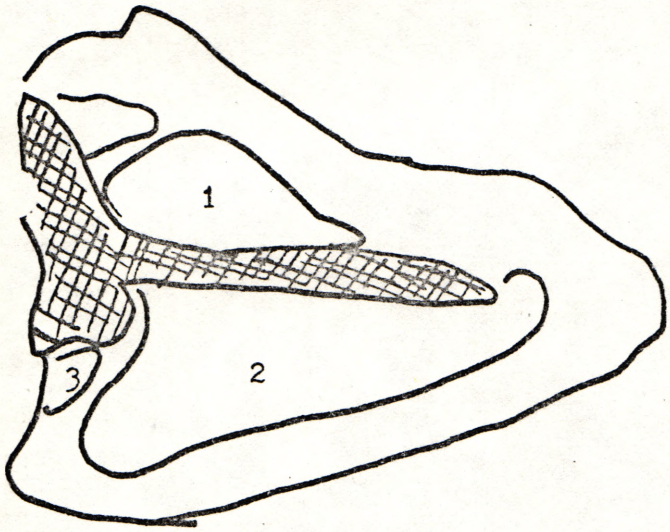
1 Multifidus dorsi
2 Spinalis dorsi
3 Complexus
4 Longissimus dorsi
5 Longissimus costarum
6 Serratus ventralis
7 Latissimus dorsi
8 Trapezius
9 Rhomboideus





PORTERHOUSE STEAK

1 Psoas major
2 Longissimus dorsi
3 Gluteus medius
4 Multifidus dorsi

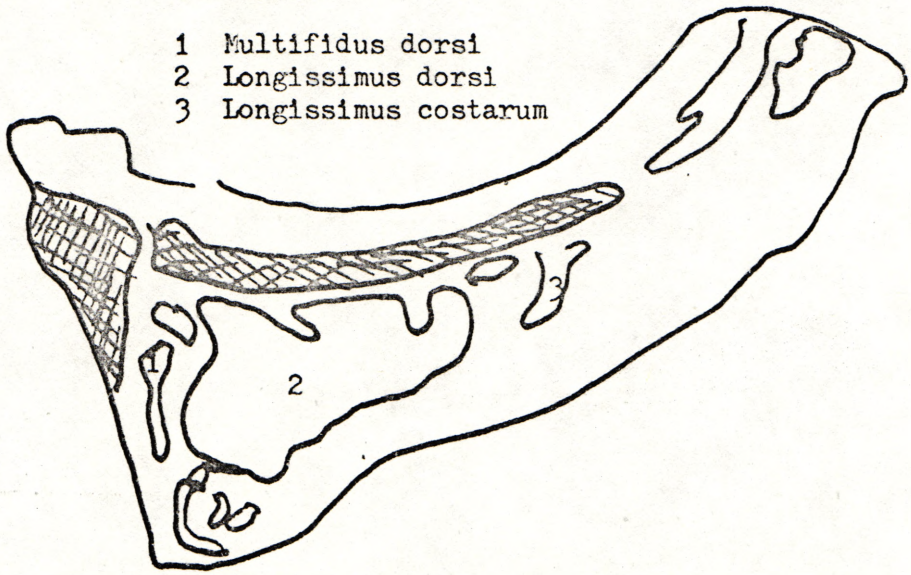


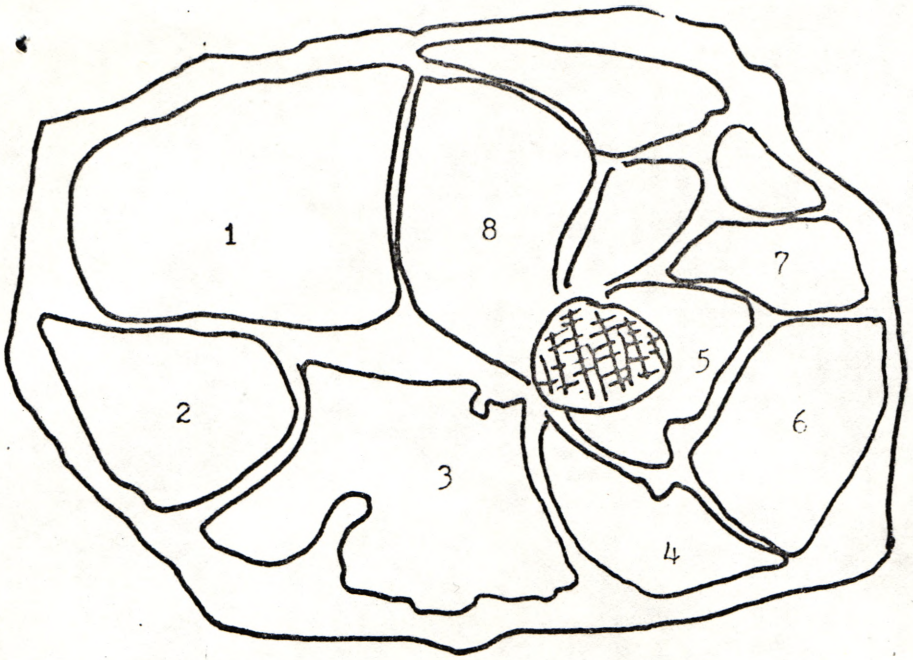
T-BONE

1 Psoas major
2 Longissimus dorsi
3 Multifidus dorsi

CLUB STEAK

1 Multifidus dorsi
2 Longissimus dorsi
3 Longissimus costarum





ROUND STEAK

1 Semimembranosus
2 Semitendinosus
3 Biceps femoris
4 Vastus lateralis
5 Vastus intermedius
6 Rectus femoris
7 Vastus medialis
8 Adductor

SIRLOIN STEAK

1 Tensor fasciae latae
2 Vastus lateralis
3 Biceps femoris
4 Gluteus medius
5 Psoas major
6 Vastus medialis
7 Rectus femoris