THESIS

on

FURS: THEIR SOURCE, PREPARATION, AND USE FOR CLOTHING.

Submitted to the

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In partial fulfillment of the requirements for the Degree of

MASTER OF SCIENCE

by

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INDEX.

FURS: THEIR SOURCE, PREPARATION, AND USE FOR CLOTHING.

1. Fur Traders in North America.
2. Fur Conservation.
3. Protection of National Fur Resources.
4. Fur Farming.
5. Market Prices.
8. Fur Tanning and Dressing.
11. True Versus Trade Names.
12. Purchase of Furs.
13. Fur Storage and Care.
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Prince Rupert, B. C.

Hudson’s Bay Store.

Seattle.

L. Smith

Fairbanks, Alaska.

C. De Witt.

Formerly buyer for Liebes Fur Shop, Portland.
FUR TRADERS IN NORTH AMERICA.

The story of the use of furs as adornment, because of necessity, and as a luxury is as old as man himself. Some say that early woman's ingenious brain devised the means for skinning stretching and tanning the pelts, others think that man should be credited with this discovery. In either event the history of the source, preparation and use of furs forms an interesting page in the story of clothing.

Furs have played an important part in shaping the destiny of North America. Cortez and Pizarro sought and found gold, silver and jewels in Mexico and Peru. Adventurers from France, England and the Lowlands came to North America on a similar quest, but were unsuccessful. Having failed in their purpose some of these men interested themselves in the furs of the country. Gradually small settlements were established in the Atlantic coast by a few of these explorers.

These settlers depended upon the natural resources for their supplies. They hunted and trapped the fur bearing animals, which were abundant at that time. The skins were light and could be shipped to London and China where they were sold at handsome prices. Organized fur traders were established in North America by the French in 1535, the Dutch were in New York in 1621, and the Russians held the Northwest in 1553.

Early fur traders and their successors are known to
have used every means from honorable dealings, debauchery
to murder to secure the furs from the natives. Alexander
Mac Kenzie said he believed "that the Indians were great
sufferers from their communication with the subjects of
civilized land." Such practice eventually cost the traders
the good will of the Indians, and the fur trade suffered ac-
cordingly.

These early fur traders took squaws to wife, who car-
rried on the menial work of the camps and forts. The child-
ren of such unions were known as half breeds, French Canadians or Voyageurs. These voyageurs, usually illiterate,
were a hardy people, having great endurance, and accustomed
to privation and hardship. These voyageurs were used in the
transportation of supplies and furs overland and by water.
The labors of this class made possible the growth and de-
velopment of the fur trading companies. They did not hunt
and trap, because they lacked the ability for this work. Da-
vid Thompson says of one voyageur in his party, "The fact
is, Jean Baptiste will not think, he is not paid for it,
when he has a moment's respite he smokes his pipe his con-
stant companion, and all goes well; he will go through hard-
ships, but requires a full belly at least once a day, good
tobacco to smoke, a warm blanket, and a kind master who will
take his share of hard times and be the first in danger".

Fur trading may be romantic and exciting in retrospect,
but the life of these early adventurers was monotonous and
full of privations, hardships, and suffering. Many of the leaders in this venture were educated men from cultured homes. Alexander Mac Kenzie, one of this group, wrote to his cousin, "I think it is unpardonable for anybody to remain in this country who can leave it. What a pretty situation I am in this winter, starving and alone, without the power of doing myself or anybody else any good." Such reflections may be found in almost any diary of that period.

Mac Kenzie goes on to tell of another experience when he and his men "had lived at Chipewyan for a full year on fish, no salt, sugar, vegetables nor potatoes." The only variety in the diet was secured by using wild geese and ducks in the spring and fall and a moose. Tobacco and an occasional glass of liquor were the only luxuries in this monotonous existence.

During these early years, the intrepid trappers and hunters had followed the fur bearing animals across the plains and through the forests of the continent. The little beaver led the white man up the St. Lawrence river to the Great Lakes, and north to the Hudson Bay; down the Mac Kenzie to the Arctic Ocean; and across the mountains and down the Columbia river to the Pacific Ocean. Sea otters caused men to sail around the world in their small ships, to the Pacific waters thence to the Behring Sea.

Warburton Pike in writing of the effect of the animal life upon the destiny of North America, says in his "The
Barren Ground of Northern Canada, "On the second day we crossed (north west of the Great Slave Lake) a large prairie dotted with lakes, formerly the homes of many beaver, and still bearing evidence of their labors in the long banks which once served as dams, and the huge mounds which were once their houses. The beavers have all gone, the ladies who wore the pretty fur trimmed jackets in far away England, and the husbands who grumbled at the prices are gone too; but the beavers have left their impression upon the earth. Wonderful moulders of geography, they are; a stream dammed in a level country forms a huge lake where the forests stood, the trees fall as their roots rot in the standing water, and if the dam be not attended to by the workers, a fertile grass covered plain takes the place of the lake".

The Indians soon learned, in their contacts with the white men, that the beaver skin could be exchanged for articles that the white man had taught him to use. Thus the beaver skin became the medium of exchange, although it never had a standard value all over the country. The Indians learned to put "trading values" on their furs, and the traders attempted to protect their profits by asking equally high prices for their wares. This is the cause of the exorbitant prices listed in some of the early accounts.

The founding of the Hudson's Bay Company reads like a fairy tale, volumes have been written upon the subject, and no attempt is being made to recount the details here.
Briefly the facts incident to the formation of the country are, two Frenchmen, Radison and Groelliers, had been exploring and trapping north west of Lake Superior. They found their way into Montreal over land, and brought with them a rich pack of furs. During the years they had been away, the French king had granted a patent to other parties conveying to them the exclusive right to these regions. This caused dissatisfaction, and Radison and Groelliers returned to France to protest against losing their rights. Failing in their mission they went to England, and met Prince Rupert who had heard of their adventures. Prince Rupert became interested in their stories, and in the wealth that might be obtained from the furs of the New World. His interest led to the formation of a company known as "The Governor and Company of Adventurers, Trading with Hudson's Bay". This company was granted a charter by the king, which gave it the monopoly on all trade in the Hudson Bay region. Today this is the oldest corporation in the world.

When the Hudson's Bay Company, as it was commonly called, found itself in control, it decided upon new policies, including a military form of organization, justice and temperance. It also decided to deal directly with the Indians in securing furs, hoping that this would prevent the extermination of fur bearing animals. It took years to win the confidence of the natives, voyageurs, and couier-de-bois, who were accustomed to the methods used by competing com-
panies. These years were filled with strife and rivalry between the smaller traders and the Hudson's Bay Company, which resulted in a loss in the fur trade.

Finally in 1783, a plan was devised and executed, for combining the many smaller companies into one large organization to be known as the North West Company, with Sir Alexander MacKenzie as director. From that time on for forty odd years, the North West Company dominated the fur trading, until in turn it was absorbed by the Hudson's Bay Company in 1821.

The Fur Traders of the United States were organized in small groups or worked independently. They never had united and formed the powerful companies as the Canadians had done. The North West and Hudson's Bay Companies had established military and fur trading posts along the boundaries between Canada and the United States. They were getting furs from the natives south of the boundary, and interfering with the business of the American traders. The United States government attempted to regulate the matter by establishing posts on their territory. They could not use the methods employed by private parties in the competition, so failed in the enterprise. If the government had there formulated a policy which would control the fur industry as it had for coining money and the postal service, it would have been far better for the trapper, trader, and consumer. Instead the government licensed individuals and companies, who in turn
met the competition of these two companies with like tactics.

About this time a young New York merchant, John Jacob Astor, of German extraction, began to buy furs in Montreal and ship them to the fur markets in China and London. He received handsome profits from his ventures. When the treaty of 1795 turned over all the Canadian military and fur posts south of the boundary to the United States, Astor conceived the idea of re-establishing these fur posts. The competition was too keen for one man to combat; Mr. Astor then volunteered to turn all of his fur trade into the United States if he could have government support in his venture. This resulted in the New York Legislature granting a charter in 1839 to the American Fur Company, which was incorporated with a stock of one million dollars and was led by Astor himself.

Astor's plans grew and it was arranged to have posts along the border, on the Pacific coast, and in the south. His purpose was to dominate the fur trade of the continent. There is a long story told of the struggles between Astor's fur company, the Russian Fur Company and the North West Fur Company, for the control of the Pacific North west. Tragedy and despair followed the efforts to establish Astor's posts on the Pacific coast. Finally the American Fur Company, defeated, sold the furs, goods, buildings and boats to the North westers at about one third of their value. This enterprise had cost the lives of some sixty-five men, and
Astor's partners received nothing for their two years of toil and peril.

The North west company became too sure of its power, and was later involved in many difficulties, which caused the British parliament to hold a public inquiry. Two years later the Hudson's Bay Company absorbed the Nor'westerns; this was a victory for Law and Order in the land. Following this comes the story of John Mc Laughlin in Old Oregon, which historians have preserved in the annals of Oregon history.

The Russian Fur Company, which had had its headquarters at Sitka, Alaska, withdrew from America when Russia sold Alaska to the United States.

Chittenden says in his History of the American Fur Trade, "It is no flight of fancy, but rather a sober and legitimate conclusion to say that if the Astorian enterprise had succeeded the course of the Empire on the American continent would have been entirely different from what it has been. With the valley of the Columbia, and the neighboring shores of the Pacific occupied by American citizens instead of British subjects during the period of controversy over the Oregon question, no part of the Pacific coastline would now belong to Great Britain".

The destiny of these fur companies is closely linked with that of the American continent. George Bryce says in this connection, "For full two centuries the Hudson's Bay
Company, under its original charter, undertook financial enterprises of the greatest magnitude, promoted exploration and discovery, at one time held governmental powers over an Empire comprising nearly one half of North America, and preserved to the British Empire the wide territory handed over to Canada in 1870."

Today the Fur companies have all relinquished their places in the political regime and are concerned with their activities in the commercial fields.
FUR CONSERVATION.

David C. Mills, director of the National Association of the Fur Industry, aptly sums up the attitude of the furriers toward fur conservation; he states that "the proper function of the fur industry is the utilization of the by-product of the struggle between man and vermin for the control of the food supply. That while all vermin are not fur-bearers, all fur-bearers are vermin when they exist in sufficiently large numbers in any given locality."

The furriers associations are keenly aware of the changing supply and demand for furs. The associations are fostering the conservation movement, because it "offers the hope of a solution of its problems for a future adequate supply of raw furs." They are concerned with measures that will insure the future of their vocations—namely, an increase in the supply of fur-bearing animals.

Figures indicating the extent of the fur industry reveal what an integral part this industry has in the economic system of the United States. In 1927 it is said $26,000,000.00 worth of furs was exported and $100,000,000 worth of furs was consumed in this country, making a total of some $126,000,000 worth of raw furs for American dressing and finishing. The fur trade ranks twenty-fifth in chief export and imports according to relative value.

"The retail value of the furs and fur trimmings used in 1927 is quoted at $500,000,000. Some 30,000 firms handled
furs and fur trimmings. There are 2,000 wholesale furriers in New York City, who produce 80 percent of all the manufactured furs and fur trimmings sold at wholesale in the United States. These firms employ upwards of 8,000 highly skilled employees.

Mr. Mills of the National Association of the Fur Industry says that "There are 160 fur dressing and dyeing firms in the States which employ 5,500 men and women at an annual wage of $8,400,000. These firms dress and dye 40,000,000 skins annually, exclusive of rabbits. In addition, some 50,000,000 rabbit pelts are dressed and dyed for fur, while an equal amount is used by the 'felting' industry."

The use of the rabbit, marmot, muskrat, lamb and kid skins, constitutes the safety of the industry, because it relieves the pressure upon the demand for better and wild furs. At present a third of the fur imports consists of sheep and goat skins.

It may be definitely stated that every species of fur-bearing mammal in the United States, excepting possibly the skunk, has diminished in numbers. Mr. Mills says he knows of no American fur-bearers that are biologically extinct, although the sea otter is commercially extinct.

For years, dealers in raw fur have mailed catalogs and price lists to trappers, much in advance of the season. This encourages some trappers to begin operations too early,
resulting in fifteen to twenty per cent of the catch being unprime. This is "waste" so far as the fur industry is concerned, for the skins are not full furred nor prime. The unprime skins have to go to the felters' industry.

Another factor destructive of animal life is the opening up of virgin lands, the drainage of streams or marshes, the pollution of streams, clearing away the forests, using water for irrigation and placing stock in the field for pasture.

The use of bird shot is wasteful, because it mars and cuts the pelage and skin, making it less valuable. The impulse "to kill," as one feels about a snake for instance, often leads to the destruction of wild animals. If the educative forces are directed rightly, this waste can be largely controlled. The dog may be as wanton as his young master; this is more true in some southern sections than here in the northwest. Hunting dogs also cause loss of animal life.

Poaching is a source of trouble, for the poacher works during the closed season. The Bureau of Biological Survey is checking the depredations of this human pest.

Many wasteful practices found in fur usage can be curtailed. Improper methods of securing, drying and shipping the skins may cause them to deteriorate or spoil and depreciate in value.
Tender skins are used for "service" garments, and of course wear out quickly.

Wrong kinds of fur are chosen, then because the owner is dissatisfied, the furs lie neglected or are spoiled by moths.

The use of furs for adornment is questioned by some, especially when women clothe their shoulders and leave the lower part of the body unprotected. The use of summer furs is called wasteful by some others.

Sheep skins of various kinds afford warmth and can be used as linings instead of the rarer furs, thus saving the latter. Furs worn on cuffs, or on the lower edge of a coat, receive hard usage. Some furriers urge women to "save fur" by not using it in this fashion.

Fur is also abused and wasted by permitting it to become and remain soiled or by not drying it properly when it is wet. One example of this is the woman who laid her mole skin coat over a hot radiator to dry. In the morning the coat was shriveled and harsh and the fur had "slipped."

Perhaps the fundamental cause of fur waste can be traced to ignorance and indifference and selfishness. Education of the public should lessen fur waste. This can be accomplished through a nation-wide campaign, carefully organized, to place the facts before the consumers of fur. Such a program will lead to an appreciation of fur usage and fur conservation.
PROTECTION OF NATURAL FUR RESOURCES

The Lacey Act was passed by Congress May 25, 1900. It extends the jurisdiction of the Bureau of Biological Survey "to the regulation of interstate shipments of wild animals or parts thereof." In carrying out its responsibility thereunder in fur conservation, the department has adopted a policy intended to be cooperative in advancing the common interests of the public.

The bureau states that fur farming is being successfully introduced, "but that the bulk of pelts entering the fur trade must continue to be taken in the wild. Fur farming is in no sense a substitute for the adequate and necessary conservation of the resources of the Individual States in wild fur-bearing animals."

The Lacey bill carries no police power. In spite of this, however, Federal and State employees are able to apprehend illegal shipments of furs, often resulting in penalties for the offenders.

It has been found that the truly reputable fur houses "are eager to co-operate to the fullest extent in the suppression of traffic in unprime and contraband skins." At present the government does not have a permanent satisfactory method of marking skins, which makes it difficult for the furrier to distinguish illegal skins. In Canada the system is to use a double tag, one-half of which is attached to the skin showing that the royalty has been paid and so
The tariff act for September 31, 1922 places a 15 per cent ad valorem on all wild animals shipped into the United States. This includes silver and black foxes, the skins of which dressed or undressed and manufactures thereof, are dutiable at fifty per cent ad valorem. Other furs on the skin not advanced further than dyeing are dutiable at twenty five per cent ad valorem. Raw furs and skins except silver and black fox are admitted free.

The State laws vary—some are lax, others stringent. They include restriction on the methods of trapping, bag limits, trapping licenses, possession and sale; shipment and export bounties, propagation and the open seasons with dates for the different animals.

It is to be hoped that State laws may be made more uniform and effective, and that "teeth" can be put into the Lacey Act. The distinctions between game, predatory and fur-bearing animals need to be established. At present some states are attempting to protect fur bearers such as raccoon and opossum, only to treat them later as game. If shot as game the pelts are taken when unprime and are of no value to the furrier. It is hoped that common-sense measures of establishing a "balance of nature" may be established that can meet the requirements of the farmer, the trapper and the sportsman.

There is a general idea that the United States stands
alone when imposing tariffs upon furs. It is worth noting that Canada imposes a duty of twenty-five per cent on all manufactured furs and seventeen and a half per cent on all dressed skins brought into the dominion from other parts of the British Empire. Otherwise the tariff is twenty per cent on dressed skins and thirty per cent on manufactured furs. Raw skins are not taxed. England and Germany both admit raw skins without duty, but France and Russia collect duty on dressed and manufactured skins.
Government reports show that fur farming is being established and that some species of fur-bearing animals can be successfully propagated in captivity. Experts are experimenting with the other species, hoping to work out the means for raising these animals in captivity for breeding stock and for pelts.

Fur farming seems to have started in the 1880's where on Prince Edward Island a few men quietly carried out experiments in fox culture. About 1910 the Russian and New Zealand governments sent their experts over to study the methods that these Prince Edward Islanders were using. This recognition of the Canadian farmed fox furs proved an impetus to fox farming.

In the meantime, fur farming must also be evaluated in terms of profits. Some furs are too expensive to produce and the market values are too low to make raising them profitable. Skunk and opossum are on this list. Other species, rabbit, muskrat, karakul and raccoons, may be profitably raised under the prevailing prices quoted in 1929.

Government bulletins giving the facts concerning fur farming are available for the asking. Prospective fur farmers are advised to obtain all these bulletins on fur farming before making investments in this new venture.
Viewed from all angles the place of the fur farmer seems assured. Wild animal life is decreasing, thus causing a greater demand for fur-farmed pelts. These farms usually are situated in areas which are of no value for agriculture such as tide-water regions of the Gulf country.

The average income of such natural marsh land is $8 to $10 more per acre than general farming on land bordering these marshes. Under the best conditions it is believed that this marsh land will yield an income averaging $100 an acre.

When carried on at its best, fur farmed pelts are usually superior to the wild, because the animal has been well fed and cared for. The prime pelt is taken from the animal which has not marred its coat in fighting nor by living in brush. Some folk protest the use of wild pelts because of the methods of trapping used to catch the animals. These people will use fur farmed pelts. But of course one wonders how often it is possible to obtain the facts.
MARKET PRICES

Market prices are governed by the law of supply and demand and the grade of the pelt. The pelt is judged as to the quality of the under fur and top hair, the color of the pelage and the general appearance of the fur; the skin is judged as to its color. Defects may be due to shot holes, trap tears, marks from fighting, or improper method in skinning. Well stretched and cased skins grade higher than those poorly prepared.

The grader also learns to recognize the differences in value due to the locality from which the skin came. Generally, pelts obtained in the far north are superior to those from warmer regions. Muskrats are an exception. The finest skunks are found in Ohio. Foxes from the far north are finer and fuller furred than those from the States.

The following tables may be of interest since they represent such extremes in value.
### SHIPMENTS OF HUDSON'S BAY CO. AND LAMPSON AND CO.

#### Hudson's Bay Co.

<table>
<thead>
<tr>
<th>Animal</th>
<th>1855</th>
<th>1856</th>
<th>1857</th>
</tr>
</thead>
<tbody>
<tr>
<td>Badger</td>
<td>1,105</td>
<td>2,001</td>
<td>12,758</td>
</tr>
<tr>
<td>Beaver</td>
<td>74,482</td>
<td>100,721</td>
<td>23,070</td>
</tr>
<tr>
<td>Fisher</td>
<td>5,182</td>
<td>8,186</td>
<td>2,422</td>
</tr>
<tr>
<td>Fox, red</td>
<td>7,371</td>
<td>7,644</td>
<td>96,395</td>
</tr>
<tr>
<td>Fox, white</td>
<td>10,292</td>
<td>4,333</td>
<td>12,743</td>
</tr>
<tr>
<td>Fox, silver</td>
<td>613</td>
<td>603</td>
<td>956</td>
</tr>
<tr>
<td>Lynx and lynx cat</td>
<td>11,634</td>
<td>15,661</td>
<td>8,100</td>
</tr>
<tr>
<td>Marten</td>
<td>-179,275</td>
<td>61,782</td>
<td>27,561</td>
</tr>
<tr>
<td>Mink</td>
<td>61,516</td>
<td>62,760</td>
<td>121,619</td>
</tr>
<tr>
<td>Musquash</td>
<td>-258,791</td>
<td>503,948</td>
<td>3,861,010</td>
</tr>
<tr>
<td>River Otter</td>
<td>13,740</td>
<td>9,625</td>
<td>14,403</td>
</tr>
<tr>
<td>Sea Otter</td>
<td>229</td>
<td>211</td>
<td>61</td>
</tr>
<tr>
<td>Rabbit</td>
<td>90,937</td>
<td>48,291</td>
<td></td>
</tr>
<tr>
<td>Raccoon</td>
<td>1,738</td>
<td>1,632</td>
<td>312,720</td>
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<td>Seal, fur</td>
<td>36</td>
<td>1,427</td>
<td>15,183</td>
</tr>
<tr>
<td>Seal, hair</td>
<td>5,263</td>
<td>3,743</td>
<td>1,540</td>
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<td>Skunk</td>
<td>11,319</td>
<td>2,331</td>
<td>863,638</td>
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<tr>
<td>Wolf</td>
<td>7,576</td>
<td>1,508</td>
<td>53,105</td>
</tr>
<tr>
<td>Wolverine</td>
<td>1,142</td>
<td>1,052</td>
<td>1,741</td>
</tr>
</tbody>
</table>
A glimpse at some of the old price lists, showing the value of pelts in earlier days, discloses how the fur market has gone up.

John G. Hayes of Portland, Maine, paid a bill March 4, 1873 as follows:

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Quantity</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Fox, No. 1</td>
<td></td>
<td>$4.00</td>
</tr>
<tr>
<td>1 Mink, No. 1, Small</td>
<td></td>
<td>3.50</td>
</tr>
<tr>
<td>1 Mink, No. 1, Medium</td>
<td></td>
<td>4.00</td>
</tr>
<tr>
<td>1 Mink, No. 1, Large, dark</td>
<td></td>
<td>5.00</td>
</tr>
<tr>
<td>2 Coon, No. 1</td>
<td></td>
<td>1.50</td>
</tr>
<tr>
<td>2 Coon, No. 2</td>
<td></td>
<td>1.00</td>
</tr>
<tr>
<td>11 Rats, No. 1</td>
<td></td>
<td>1.98</td>
</tr>
<tr>
<td>6 Rats, No. 1, Small</td>
<td></td>
<td>.60</td>
</tr>
<tr>
<td>2 Rats, No. Kits</td>
<td></td>
<td>.10</td>
</tr>
</tbody>
</table>

Another price list:

Mr. M. J. Wood, bought of L. D. Halsted, Coldwater, Michigan on January 3, 1885.

Five sacks and two bales.

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Quantity</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Blk Cat</td>
<td></td>
<td>$ .60</td>
</tr>
<tr>
<td>4 Common Cat</td>
<td></td>
<td>.40</td>
</tr>
<tr>
<td>1 Sampson Fox</td>
<td></td>
<td>.30</td>
</tr>
<tr>
<td>14 No. 1 Coon</td>
<td></td>
<td>11.20</td>
</tr>
<tr>
<td>8 No. 1 Ord. Coon</td>
<td></td>
<td>5.20</td>
</tr>
<tr>
<td>42 No. 2 Coon</td>
<td></td>
<td>16.80</td>
</tr>
<tr>
<td>50 No. 3 Coon</td>
<td></td>
<td>12.50</td>
</tr>
<tr>
<td>20 No. 4 Coon</td>
<td></td>
<td>2.00</td>
</tr>
</tbody>
</table>
W. W. Hubbard of Monroe Company, New York, has permitted Mr. Harding to use the following bill for furs that he sold to O. A. Gunther's sons in 1887.

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Quantity</th>
<th>Unit Price</th>
<th>Total Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>31 No. 4 Small Coon</td>
<td>- - - -</td>
<td>.05</td>
<td>$1.55</td>
</tr>
<tr>
<td>80 Muskrats, 2 fall</td>
<td>- - - -</td>
<td>.11</td>
<td>$8.80</td>
</tr>
<tr>
<td>30 Muskrats, Kits</td>
<td>- - - -</td>
<td>.63</td>
<td>18.90</td>
</tr>
<tr>
<td>74 Skunk, 1 cased</td>
<td>- - - -</td>
<td>1.25</td>
<td>92.50</td>
</tr>
<tr>
<td>18 Skunk, 1 brown and wooly</td>
<td>- - - -</td>
<td>1.00</td>
<td>18.00</td>
</tr>
<tr>
<td>55 Skunk, 3 cased</td>
<td>- - - -</td>
<td>.75</td>
<td>41.25</td>
</tr>
<tr>
<td>33 Skunk, 3 cased</td>
<td>- - - -</td>
<td>.40</td>
<td>13.20</td>
</tr>
<tr>
<td>27 Skunk, 4 cased</td>
<td>- - - -</td>
<td>.20</td>
<td>5.40</td>
</tr>
<tr>
<td>4 Skunk, scabs</td>
<td>- - - -</td>
<td>.03</td>
<td>.12</td>
</tr>
<tr>
<td>1 Mink, 3</td>
<td>- - - -</td>
<td>.60</td>
<td>1.80</td>
</tr>
<tr>
<td>3 Mink, scabs</td>
<td>- - - -</td>
<td>.10</td>
<td>.30</td>
</tr>
<tr>
<td>1 Mink, 2</td>
<td>- - - -</td>
<td>.40</td>
<td></td>
</tr>
<tr>
<td>3 Red Fox, 1</td>
<td>- - - -</td>
<td>1.25</td>
<td>3.75</td>
</tr>
<tr>
<td>6 Coon, 1</td>
<td>- - - -</td>
<td>.80</td>
<td>4.80</td>
</tr>
<tr>
<td>6 Coon, 2</td>
<td>- - - -</td>
<td>.40</td>
<td>2.40</td>
</tr>
<tr>
<td>5 Coon, 3</td>
<td>- - - -</td>
<td>.20</td>
<td>1.00</td>
</tr>
<tr>
<td>9 Coon, scabs</td>
<td>- - - -</td>
<td>.06</td>
<td>54</td>
</tr>
</tbody>
</table>

Liebes Fur Company of the Coast cities quotes the following prices for March 1929. It is interesting to note that the company specifies this price list is for furs legally taken.
<table>
<thead>
<tr>
<th></th>
<th>Extra Large</th>
<th>Medium</th>
<th>Small</th>
<th>Smallest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.1</td>
<td>No.1</td>
<td>No.1</td>
<td>No.4</td>
</tr>
<tr>
<td>Badger, heavy, full furred</td>
<td>$40.00</td>
<td>$30.00</td>
<td>$20.00</td>
<td>$10.00</td>
</tr>
<tr>
<td>Ermine and White Weasel</td>
<td>3.00</td>
<td>2.00</td>
<td>2.00</td>
<td>1.50</td>
</tr>
<tr>
<td>Lynx Cat, heavy furred</td>
<td>20.00</td>
<td>15.00</td>
<td>10.00</td>
<td>6.00</td>
</tr>
<tr>
<td>Lynx, ordinary House Cats</td>
<td>.60</td>
<td>20.00</td>
<td>20.00</td>
<td>15.00</td>
</tr>
<tr>
<td>Wolverine, dark</td>
<td>25.00</td>
<td>20.00</td>
<td>25.00</td>
<td>15.00</td>
</tr>
<tr>
<td>Lynx, heavy furred Marten, Alaska</td>
<td>50.00</td>
<td>40.00</td>
<td>30.00</td>
<td>20.00</td>
</tr>
<tr>
<td>&quot; British Col.</td>
<td>70.00</td>
<td>50.00</td>
<td>40.00</td>
<td>30.00</td>
</tr>
<tr>
<td>&quot; Brown</td>
<td>45.00</td>
<td>35.00</td>
<td>25.00</td>
<td>15.00</td>
</tr>
<tr>
<td>&quot; Pale</td>
<td>35.00</td>
<td>25.00</td>
<td>25.00</td>
<td>15.00</td>
</tr>
<tr>
<td>&quot; Ore and Wash: Pine</td>
<td>20.00</td>
<td>15.00</td>
<td>10.00</td>
<td>8.00</td>
</tr>
<tr>
<td>Fox, Ore, and Wash.</td>
<td>300.00</td>
<td>and down as to beauty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; Silver</td>
<td>150.00</td>
<td>and down as to beauty, size</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; Blue</td>
<td>65.00</td>
<td>45.00</td>
<td>35.00</td>
<td>25.00</td>
</tr>
<tr>
<td>&quot; White</td>
<td>50.00</td>
<td>40.00</td>
<td>30.00</td>
<td>20.00</td>
</tr>
<tr>
<td>&quot; Alaska, B.C. Red</td>
<td>30.00</td>
<td>25.00</td>
<td>16.00</td>
<td>11.00</td>
</tr>
<tr>
<td>Beaver</td>
<td>27.50</td>
<td>22.50</td>
<td>16.00</td>
<td>12.00</td>
</tr>
<tr>
<td>Otter, River</td>
<td>10.00</td>
<td>8.00</td>
<td>6.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Raccoon</td>
<td>1.75</td>
<td>1.25</td>
<td>.90</td>
<td>.70</td>
</tr>
<tr>
<td>Muskrat</td>
<td>4.50</td>
<td>4.00</td>
<td>3.50</td>
<td>3.00</td>
</tr>
<tr>
<td>Skunk, Black</td>
<td>4.00</td>
<td>3.50</td>
<td>3.00</td>
<td>2.50</td>
</tr>
<tr>
<td>&quot; Short</td>
<td>4.00</td>
<td>3.50</td>
<td>3.00</td>
<td>2.50</td>
</tr>
<tr>
<td>&quot; Narrow</td>
<td>3.00</td>
<td>2.50</td>
<td>2.00</td>
<td>1.50</td>
</tr>
<tr>
<td>&quot; Broad</td>
<td>1.25</td>
<td>1.00</td>
<td>.75</td>
<td>.50</td>
</tr>
<tr>
<td>Mink, dark</td>
<td>20.00</td>
<td>15.00</td>
<td>16.00</td>
<td>14.00</td>
</tr>
<tr>
<td>&quot; ordinary</td>
<td>15.00</td>
<td>12.00</td>
<td>10.00</td>
<td>8.00</td>
</tr>
</tbody>
</table>
STRUCTURE OF FUR

A pelt is the covering of an animal, and is composed of the skin and the pelage, which is known as wool hair or fur. The pelt serves as a protection, and a sensory organ.

The skin is composed of the outer layer, called epidermis, and the under part, which is the true skin, called corium. The under portion of the corium is thick and likened to bundles of white interlacing connective tissue. The corium includes the fat glands, sweat glands and hair roots. It is attached to the body with a network of tissue, often filled with fat cells. When the pelt is dressed, this fat is removed during the "fleshing" operation.

The pelage may consist of two kinds of fur. The long, stiff, coarse, straight hair is known as the top hair, guard hair, or over hair. The shorter, softer, finer under fur is the under wool or under hair. This may be like soft hair, or woolly in texture.

The under fur protects the animal from the cold; the top hair keeps the under wool from matting. The over hair is in some cases of major importance since the value of the fur depends on it.

Examined under a high-powered lens, the pelage looks rough and scaly. Such serrations occur in some degree on all furs. They are not of the same size or spacings on all species. The luster of the fur depends upon the smoothness of the hair and under wool. Since light reflects better
from a smooth surface, smooth hair appears more lustrous. If the hair is rough the light rays are broken, and the hair does not seem to possess luster.

Fur is similar to wool in its reaction to chemicals. Knowing that many furs are obtained from the sheep family, one can understand why wool tests on cloth may react as they do on some furs.

Dilute acids have very little effect on the hair. Alkalis will attack the hair and may roughen it. Sulphurous acid may bleach the color. One should therefore avoid using chemicals on furs for cleansing or for any other purpose.
HISTORY OF FUR DRESSING

The early beginnings of fur dressing are obscure. While we know that man's first covering consisted of fur, very little has been recorded of his fur-craft. Bits of facts have to be pieced together, and the imagination of the reader must supply the rest.

The earliest use of furs consisted in skinning the fur, stretching and drying it, then wearing it with the pelage next to the body. These furs were stiff and harsh and were neither comfortable nor beautiful as we judge furs.

During these earliest historic ages, women dressed the furs brought in by the men. Through accident or the trial-and-error method women learned that leather became more pliable and soft if it was pulled and stretched as it was drying. They probably used shells or sharp edged stones to "flesh" the skins.

Here and there in the classics and the Bible are found references to furs. For example, "Ram's skins dyed red and badgers' skins were among the covering of the tabernacle in the wilderness." "Unto Adam and to his wife did the Lord God make coats of skin and clothe them."

Sometime during these dim past centuries the early methods of dressing skins were developed. Probably the first method of tanning consisted in rubbing fats or oils into the flesh side of the skin. Brains or milk were used for this purpose; Chamois dressing today is carried on in a similar
The Eskimos and Indians of the Yukon country and northern Alaskans still use the olden process of chewing the oiled skins to stretch and tan them. (I have leather that was tanned in this manner by the Moose Hide Tribe, south of Dawson, Y. T.)

Salt was found to act as a preservative to the leather, then alum was added, giving the fundamental process that has come down through the ages. The "aluta" (alum leather) of the Romans is thought to have been dressed with salt and alum.

The early women found, again we can only guess how, that furs dressed in bark or nut water were soft and pliable. These early craftswomen did not know that they were originating the process of tanning to prevent leather from putrefying. They used the barks and nuts of the oak, sumac, pine, alder, and acacia, and carried on their task to a lasting process. Austin says that the Orientals used nutgall, the Occidentals had oak-tan, and the Saracens employed alum in their tanning. This process of using vegetable tannin has been the only one until the advent of the recent chemical agents.

Records of old civilizations antedating the Christian era suggest that furs were used as ornaments by the rich and the nobles.

The use of furs and the trading in furs is thought to
have been well established about 700 A.D. It is amusing to find that in the 10th century moralists condemned the use of furs as "most outrageous and ruinous."

By this time fur cloaks or fur-lined cloaks were used by the royalty. Peterson quoted a record to the effect that "in 1251 in the account of Master Robes to Louis IX of France, there is a charge for an ermine lining for a surcoat, in which 340 ermines were used for the body of the garment, 60 for the sleeves and 336 for the frock." It is related that "one King John had two suits trimmed with 670 Marten skins, while 10,000 Marten were used in the production of five mantles and five overcoats for his son." Said King John's grandson had 3790 ermine in his robe. It may be an indication of the extravagance of that period that ermine in lots of 50 sold at the equivalent of $24.00 per skin.

Pliny credits Tycheos of Boetius, a Greek, as being the oldest known tanner. Pliny regarded him as the discoverer of tannins and their use in tanning furs.

"The industry of fur dressing gained recognition in 1182 under Philip Augustus, of France, who granted favorable concessions to a guild or "corps" or fur men, placing them on an equal basis with drapers, grocers, mercers, hatters and goldsmiths. For a time the fur industry flourished so that it assumed a place of leadership among the six."

The Parisian "corps" was at its height of influence from the 13th to the 14th centuries. In 1292 A.D. its mem-
bership was 214, in 1300 A.D. it was 344. From the 14th century on, silks and velvets and linens came in and replaced furs. Then the fur dressers "corps" lost its position of power and prestige until in 1620 the membership had dwindled to 30.

Edward III of England restricted the fur dressers of London by various measures. The King's decree in 1336 "forbade the wearing of furs by any except members of the royal family, prelates, earls, barons, knights and ladies and other persons with an income not less than 100 pounds per annum."

From 1400 to about 1550 the furriers trade of dressing was quite passive, owing to a limited supply of raw furs, high costs which only the wealthy could pay, and to sumptuary edicts against the general use of furs. During this time furs were used largely for trimmings.

On August 27, 1925, the Furriers Guild of Leipsig (Leipsizer Kwerschner Innung) celebrated its 500th anniversary. This is one of the first guilds formed after the dark ages, when history neglects the story of furriers. "It forces one to a realization that Leipsig was the cradle of the world's fur industry. It was here in 1425 that the first guildsmen formed their trade body for the protection and development of their craft. It is hard to realize that 500 years ago, these craftsmen were handling, dressing, treating and manufacturing fur skins, and that fine Russian
sable, ermine, sea otter, wolf and fox and bear were worn exclusively by the members of the various royal families, the nobility and the military." The fur labor unions of today owe much of their skill and success to their guild predecessors.

When the North American continent was discovered with its wealth of furs, the history of furs changes from one of luxury to one of utility for folk of middle classes.

It is not many years since science has been called to aid the fur dresser. Today the fur dresser can turn out the skins in from one to two days, whereas in olden days the tanning process required from two to six weeks. These modern processes have of course had to be developed carefully. The resume of tanning and dyeing processes in the next section is intended to state the facts that any consumer of furs should familiarize herself with before purchasing expensive furs.
FUR TANNING AND DRESSING.

Pelts are skinned from the animals and are prepared "flat" or "cased" for shipment. Flat skins are obtained by slitting the skin down the belly and round the feet and head. The skins are fastened to a loop or board, which permits a slight stretching. They are then dried in the trapper's cabin or out of doors until ready for shipment. The best skins are dried in the shade in fresh air. Smoky air, artificial heat and sunlight tend to dry the skin until it becomes hard or scorched. The drying room should also be free from fumes from salt and alum.

Case drying consists in slitting the skin from one hind foot to the other, and drawing the pelt off the body intact, as a glove is pulled off the hand. These skins are placed on frames which stretch and hold them in place while they are drying. The pelts of most animals are cased flesh side out. A few are cased fur side in until partly dry, then turned fur side out to complete drying. These case-dried skins are kept intact through the dressing processes, unless there is a specific need for slitting them open.

It is common for fur dressing firms to work with one group of furs. The pelts from domestic animals, including sheep species, wild sheep and goats, have to be handled in a somewhat similar manner. The other group includes the wild species. The life habits divide animals into carnivorous and herbivorous groups. The pelts of these two groups
are not alike, either in leather or fur. Consequently some-
what different methods of tanning and dressing are involved in
preparing these two groups of pelts for the market.

Beaming or scraping. Pelts when received from the
trapper have flesh and fat adhering to the flesh side of the
skin, in addition to being soiled or perhaps blood stained.
Beaming consists in scraping the skin so that the under side
of the skin is smooth and free from the fat and flesh.

Softening. The skins have to be thoroughly moistened
in order to soften the skin preparatory to tanning. The
putrefaction of the skin was arrested when it was dried.
When the skin is moistened the process is renewed. Conse-
quently the moistening and softening must be stopped at the
right time, lest putrefaction continue until it causes dis-
integration. Simple chemicals such as borax, formic acid or
salt may be used in the water for the "softening." After
softening the pelts are placed in a "tramping" machine which
works the pelts until the skin is softened sufficiently.
Then they are rescraped with a blunt beaming knife.

Cleaning. Pelts are cleaned at this stage by drumming
with dry sawdust, or washing in soap and water. They must
be thoroughly rinsed, because if any of the cleansing agents
were left on the pelt they would dull the luster of the fur.
Rinsing is followed by drying in centrifugal machines.

Fleshing. This process consists in "hand-scraping" the
finer skins, to remove the layers of fat and flesh that lie
next to the corium. It is a task requiring skilled labor, for the evenness and smoothness of the leather depends upon this scraping. Larger or coarser skins are "machine fleshed," but the fine, delicate smaller pelts are not satisfactory unless "hand fleshed."

Tanning is preparing a raw skin so that the product is a soft flexible leather free from putrefaction. Fur tanning has to be done in a manner that produces good leather without injury to the appearance or texture of the fur. All tanning processes are evolved from the simple methods used by primitive women.

The tanner must know whether the pelt is to be used natural, blended or dyed, in order to use the proper tanning which permits successful dyeing.

Many methods of tanning are in use, these comprising vegetable, mineral, oil and combination processes. If one is interested in the details and chemistry of this subject read Austin, "Fur Dressing and Fur Dyeing" Chapter V.

When choosing the method of tanning for a given pelt, several factors are involved. The nature of the pelt, whether it is weak or strong, thick or thin, coarse or fine, or to be used natural or dyed. The labor and time required for tanning and the cost of the chemicals used in tanning and dyeing are factors which influence the market price of pelts for the producer and the consumer.

Skins of the same species do not react exactly alike
when tanned. There is a variation in the shrinkage and quality of the leather. This may be due to a slight difference in the tanning, or to some skins being more greasy than others.

Tanners have carried on many series of experiments to determine which of the many tanning processes gives the finest results with the lowest economic costs.

Albrecht cautions his patrons that there is considerable risk incurred when a patron sends in green pelts to be tanned. He finds that on the average one out of every fifteen green pelts sent to him is worthless after tanning. This is due to the pelt being improperly dried after skinning, as a result of which it is grease-burned or tainted. This injury, which cannot be detected until after tanning, results in the leather being stiff and harsh, and the fur "slips" or comes off. Another St. Paul tanner told of dressing one lot of twelve Beaver skins, all of which were worthless, owing to the slipping. The owner of the pelt of course loses his pelt and the costs of tanning. Generally speaking, therefore, it is wiser to pay a little more for a pelt that is dressed and known to be in good condition than to gamble with green skins.

Drying. In olden times a few skins were placed on racks in a loft and allowed to dry slowly, being turned and stretched as needed. Today large drying rooms filled with racks are used. These have forced air currents and a con-
trolled temperature to facilitate the drying process.

Furs can be ruined if the leather is not properly dried. The essentials for good drying are proper temperature and the uniformity and rapidity with which the process is accomplished. The modern drying is completed in from 6 to 24 hours.

If furs are not dried successfully, they are stiff and harsh and they crackle or even peel and crack. Well-dried furs are soft and flexible and have a "good feel."

**Oiling.** After drying, if the skins have not been previously oiled, butter oil or fat is worked into the flesh side of the leather. Only the best grades of fat are used for this oiling. The oil coats the fibers of the corium with a thin layer of fat. This action increases the resistance of the skin to water, and makes it soft and more pliable.

**Leathering or staking.** The leather of the pelt is now ready for the staking, which consists in stretching and drawing the skin side of the pelt over a dull blade. This increases the flexibility and softness of the leather, removes any traces of stiffness or harshness, and gives the resilient quality so desirable in the leather of well-dressed furs.

Cased skins have to be leathered on an especially prepared apparatus. One man, on this casing machine, can stretch as many as 6000 skins a day or stretch and turn
4,000 to 5,000 skins a day.

Combing and Beating. Since the fur of the pelt is matted and packed after these tanning processes, it must be combed and brushed to restore it to its former condition. This is accomplished by hand, on the rare furs; otherwise it is a machine process. During this beating and combing, all foreign matter such as dust, dandruff or bits of vegetation are removed, thus making the fur more hygienic and clean.

Drum Cleaning. This is accomplished by machinery. The pelts are placed in a revolving drum with a fine quality of hardwood sawdust. Sometimes chemicals are added to improve the color. The furs are drummed from two to several hours. After the sawdust is removed from the pelts, the fur is found to have a gloss and luster. All traces of the preparing processes have been removed, and the pelts are ready for specific processes.

Plucking and Dehairing. Beavers, otters and nutria have stiff, coarse top hairs that must be removed because they detract from the appearance of the fur. In by-gone days the plucking was done entirely by hand, but this is too expensive a process for modern business. Modern methods involve the use of new machinery. The skins are carefully prepared and then sent to the "pickers." The skin is subjected to heat until the guard hairs can be easily removed. This operation is accomplished with the aid of the picking knife and pieces of rubber similar to hosing placed over the
Plucking the hair between the rubber and the knife is easy though tedious. The soft downy under fur remains. In the case of the seal, the roots of the guard hairs are destroyed by the action of the chemicals applied to the skin side. The roots of the fur hair are not affected. This obviates the need for the usual plucking.

Cheaper furs are sheared to remove the ends of the guard hairs and to produce an even surface on the fur. One can detect the method used by looking into the fur. Plucked fur does not have shiny ends of guard hair showing, as the sheared fur does.
 Naturally one asks, "Why should furs be dyed? Furs are attractive in their natural colorings, why change them?" The answer is complex, because there are various justifications for the dyeing.

In the earliest times, dyeing was used to conceal poor or faulty color—in other words to cover a defect. Evidently this was common during or before the 14th century, if the practice is to be judged by the verse of Sebastian Braut, a German satirist.

"Man kami y etzt alles Pelzwerk Farben,
Und tut es auf das schlechste gerben."

Leipsig claims to be the oldest established dressing and dyeing center in Europe, dating back to 1850. The name "dyers" is rarely ever mentioned in the literature of the intervening years. This may be due to the royal decrees prohibiting fur dyeing. Such decrees probably resulted from dyed furs being sold as natural, and of course the deception offended the royalty and the wealthy of that day. Probably these decrees caused fur dyers to carry on their work in hidden shops, and kept the men from being known by their rightful guild name.

The formulae for seal dyeing were the London dyers' secret until 1882. At that time a British seal dyer was brought into Germany, and this specialist inaugurated the seal dyeing industry of Germany. By 1861 the Leipsig dyers
were using black dyes on lamb skins, brown dyes were introduced by 1881, and the Sielitz method for Alaska seals was perfected about this time. Rabbit dyeing had become well established by 1870. The patents for rabbit dyeing belonged to the French until then.

Blending is said to be of Russian origin but was introduced and used in Germany by 1890.

Practically 90 per cent of the skins on the market today would not be in popular demand if it were not for the dyers' art. Skins that were valueless in the fur trade ten years ago are now dyed so that they are more desirable dyed than when natural. Formerly but ten to fifteen per cent of the nutria catch could be used for furs; the remainder was consumed for hatter's fur. Today 90 per cent of the nutria is used natural or dyed for fur. This is the result of finding dyes which give the Beaver color when applied to nutria.

"Hudson seal" which is dyed muskrat, is another example of what the dyer's skill has accomplished. Even Southern tope are now dyed Hudson seal. Methods have also been perfected for dyeing mole, hare, squirrel, susliki, muskrat, or fox any desired shade found on a color card. The Federal Dyeing Plant has turned out 102 colors of mole skin, ranging from yellow, orange, blues, browns, to reds and rose colors.

There are certain furs that are always dyed, and are known to the public as dyed furs. Seal is always dyed.
Formerly the "seal" color alone was used; today it is also found in black and lovely browns. Certain lamb skins such as Persian, Astrachan and Caracul are always dyed, because the natural color is rusty or greyish. These two instances illustrate how dyes are used to improve color, not to conceal faulty color.

The fur industry has furnished a good example of Gresham's law, that the cheaper replaces the more expensive, and that cheap things in turn become expensive when the demand for them increases.

Fitch was not used extensively until Kolinsky, which had been used to imitate Sable, became expensive. Today Fitch is classed with precious furs. The Susliki was not valued until an imitation of Silver Fitch on Susliki brought it into the class of high-priced furs.

Squirrel formerly had to be dyed a dark Sable, and this had to be accomplished on full-haired light Russian skins. All Squirrel can now be dyed for use in perfect imitation of Russian Sable. Today practically all Squirrel can be used, whereas only about 20 per cent of the pelts could once be used by furriers.

Another reason for fur dyeing is to provide uniform coloring, making it possible to match skins more quickly and easily. Usually this is done for the smallest skins, such as mole, because it requires so much time and labor to match them in lots of hundreds.
Fur fashions demand a greater variation in fur coloring than Nature provides. So the dyer accedes to the whims of fashion and produces novel phantastic, bizarre, or popular shades, very few of which remain on the market.

Fur dyeing is the most difficult of all the divisions of dyeing because the dyeing must be accomplished without injuring the leather and hair. Hot dyes cannot be used, 100°F. being the highest temperature that should be used. If the dye is too hot it burns or shrivels the leather or singes the hair. Since the leather usually absorbs the dye more readily than the fur, this becomes an economic factor in the costs of dyeing.

The hair or fur on pelts is not all alike. Each species of fur has a different kind of hair. Even pelts in one species are not just alike owing to natural differences in the pelts. The under hair and top hair do not have the same reaction toward dyes. Some pelts have many values of color ranging down their back, which presents another problem for the dyer. In spite of this the dyer must produce a uniformly dyed product. The dyer has to use chemicals that will not injure the luster and gloss of the top and under hairs. Dyeing must not affect the flexibility and softness of the leather nor cause it to lose its non-putrefactive character.

Dyed furs must also possess fastness to light, they must not fade as they grow old, and the dye must not rub or wear off. Dyed fur has assumed such an important place in
the fur industry that they are equally in demand with the natural furs.

**Dip and Brush Dyeing.** The two principle methods of fur dyeing are the dip and the brush process. The chemist who is developing fur dyes makes use of a microscope. A careful study is made, under the high-powered lens, of the physical characteristics of the under and top hairs. This may show a structure that will lead to a new treatment, possible opening a new market for fur and for the furriers.

Pelts are sorted. Then they are "killed" by the dip or brush methods, which makes the hair more susceptible to the dye bath, followed by mordanting which fixes the dye on the hair. These processes are then followed by dyeing.

Brush dyeing is the older of the two methods. In the olden days the dyers were afraid to dye the leather, for fear of injuring its quality, so they developed the system of applying dye to the fur only. This was done with dye-pastes, or brushes, and the color was applied to the tips of the hair, until it penetrated the desired depth. This was a slow, tedious effort. Brush dyeing is now accomplished with machines on the cheap skins.

Later some inquisitive dyer tried to dip or vat-dye a pelt by immersing it in a dye bath. Good colors were obtained, but the texture of the leather was affected. Experimentation has resulted in new formulae for tanning, which if used with proper dyes produce the desired color and
leather.

Brush dyeing and dip dyeing are used together and as such the process is called combination dyeing. In combination dyeing the skin is given a dip-dye in light colors, and the darker shading is produced by brush dyeing. Imitation Sable dyed on Kolinsky is an example of this method where the light dye bath is given, then the striping is brushed on to produce the characteristic markings.

**Bleeding** is done for the purpose of obtaining the desired color. It consists in lightly brushing dye on, without actually dyeing the top hair. It is used on furs prepared for imitation of better grades of fur. Hudson Bay Sable, Baum Martin and Minks often have poor color, and are made very desirable when blended.

Rare, precious skins are given individual attention, and no two pelts need just the same treatment.

When the desired color is obtained the furs are washed, hydroextracted and dried. The skins are redrummed in sawdust to remove the excess dye, to clean the hair, and to soften the leather. After stretching, the furs are ready to be shipped for manufacturing.

**Bleaching.** The vogue for light colors has caused the fur-dyer to attempt bleaching the skins. Means have been perfected for removing all the color from dark skins, even black, without injury to the fur or leather. Probably if the layman knew the whole story, he could tell of the black
fox that is white, the black bear sold as a white polar bear, or a red fox converted into a white fox, Truly the time has come when a leopard can change his spots in the fur dyer's shop.

The various bleaching methods are said to change the coloring of the hair into a colorless compound, the bleach therefore being permanent. Furs called white are usually a creamy or yellowish color. These are often bleached, then dipped in a "bluing" bath to produce the desired blue white. Such furs are drummed with talc or gypsum.

It is customary to place an indelible stamp on the skin of each pelt bearing the name of the firm which dressed and dyed it. One who is buying pelts soon comes to know that certain names are a guarantee of quality in this field of industry, even as is true in the textile industry.

Dyes. Until some thirty-five years ago, vegetable dyes exclusively were used in the fur-dyer's establishments. Wood dyes is a general term given to indicate the dyes that are obtained from bark or wood of certain trees. New dyes were made available to Europe after the discovery of America. Logwood and Brazil wood became two of the most important woods used. Other wood barks that are still being used are gall-nuts, sumach, cutch, fustic and acacia.

The abundance of analine dye is one economic factor that helps to keep even cheap furs within the budget of the average women. Perkins obtained the first synthetic coal-
tar dye in 1856, but aniline dyes were not generally used on furs until the late nineties. The Aniline Black is perhaps the most important of the mineral dyes. It is so strong that it has to be applied with the brush because the dye destroys the leather. After the brush dyeing, the fur is dip-dyed in logwood to give brilliancy and luster characteristic of logwood.

The story of aniline dyes and furs comprises a recital of successes and failures of some thirty-five years duration. Patience, persistence, science, and the late War have combined to develop the industry in this country. It is recognized that the United States is producing the finest dyed furs that can be obtained for commerce.

**Pointing.** The Silver Fox is known for the silver tipped guard hairs, and is valued in proportion to the spacing and number of these silver tips. Imitations of the silver fox are legion owing to "pointing." This consists in inserting and gluing white hairs into the black pelt. Pointing is also done with an electric process that drives the root of the white hair into the leather. This method produces a fur that is not advertised as an imitation. The process is expensive, so one need not expect to find the fur cheap. Badger and oppossum top hairs are generally used for pointing.

**Repairing Imperfections.** After the pelts are dressed, they are examined for imperfections. These may consist of
shot holes, scratches, scars, or any other defect. If the
blemish is small, a long narrow dart is cut removing the im-
perfection, then the slit is sewed together, the skin is
moistened and stretched out smoothly to dry. Very few pelts
are free from slight imperfections, and a pelt is not graded
down too severely for such minor defects.

Matching. After dressing and dyeing is completed, the
furs are graded, or matched. Since no two skins are iden-
tical, the problem is to try and match the pelts in size,
quality of leather, texture of fur, color and luster of the
fur and for habitat.

Usually these furs are strung together, and kept until
needed in the designing room. Small pelts after matching
are made into bundles or strings, of 50, 100, or 500. and
are sold in lots instead of singly as the larger pelts are
sold.

Much responsibility is entailed in "matching." Graders
and sorters are among the best paid men in the fur industry
because these men acquire their skill through years of ex-
perience.

Designing. Skilled artists in fur designing are employ-
ed by the industry. These designers are abreast of the
fashions, know their furs, and are able to originate styles.
Designs for expensive models are worked out with sketches or
water colors. Sometimes cheap fur is used as a medium for
working out a design to be embodied in expensive fur later
The designer has a manila paper or cloth foundation pattern. This is spread out and the pelts are laid on to the pattern. The size of the pelt, the texture of the fur, its color and markings are utilized in producing the design. The fur is cut, tacked together, and given to the stitcher. The designer and cutter must know the qualities of the leather they are handling, so that they can calculate the "stretch" that will be present when the garment is blocked out and completed. They also have to provide for shrinkage in case it is necessary as a fitting measure or for other purposes. Small furs have to be used in designs which utilize the seams as a part of the design. Mole or squirrel skins are notable examples of this problem.

Dropping. Many pelts, such as the Martens, Sables and Minks, have a natural darker coloring or marking down the back. When working these skins it often becomes necessary to lengthen them. Seams made by joining the pelts end to end result in ridges and destroy the beauty of the workmanship. The skin that needs to be lengthened is therefore "let out" or dropped by cutting a W across the pelts. The edges of each V are drawn together and stitched for an inch, then the two parts are sewn together and the pelt is lengthened by one inch. This is repeated until the required length is obtained. Of course the skin becomes narrower as a result of dropping. An immense amount of work is entailed in
dropping a skin, and of necessity this adds to the cost of the garment. This is the only satisfactory way to preserve the natural stripes and yet change the shape of the skin.

Many of the chokers and scarfs are dropped to make them long enough. Two pelts can be joined without the piecing showing, when this is done as a part of dropping.

**Sewing and Blocking.** The designer and cutter depend upon the seamstress to follow their directions in stitching the pelts together. Formerly this was all hand work; it still is in Europe and Asia. The Americans are using power machines. Hand-sewn furs from abroad are machine stitched in the American shops to provide the necessary strength.

The pattern for the garment is chalked on to a flat blocking board. The sewn fur is then placed, fur side down, and is tacked to fit the pattern. The leather has to be dampened, so that it may be stretched or shrunk when drying. If the designer has erred in judging his leathers, the shrunken part may become thick and clumsy. If stretched too much, the fur is thinner than on other parts of the pelt.

**Joining and Taping.** After blocking, the fur is removed from the board and the seams are joined; the sleeves, facings and collar are set in place and sewn together.

Tape is basted over seams that may need reinforcement. Crinoline or muslin is sometimes used to reinforce the entire garment. This is tacked carefully to hold it in position, to afford the strength.
Edges of collars, facings and hems are usually taped before the edge is turned under. This also provides greater strength. These steps in manufacturing are often omitted in the cheaper furs, and constitute one reason for the furs giving such poor service.

Reliable merchants will caution their customers against the probability of rips or breaks occurring. This is not a sign of inferior fur, but is due to the seam being too shallow, or to undue strain.

Linings. The amateur in a fur shop can judge much of the quality and grade of a garment from the lining. Silks, satins, brocades and sometimes woolen cloth are used. The color harmony may be in contrasts or matching the color of the fur. One never wishes to have a lining dominate the fur garment.

One should be careful to choose a good lining which will not have to be replaced too soon.

Interlinings of cotton wadding or outing flannel are generally used to conceal the seams of the leather and to give the silk lining a soft, cozy feel.

The garment is then brushed and whipped to remove the loose hair from the seams, and to fluff up the fur. The fur is rubbed with a damp cloth in the direction of the grain of the pelage. After it is dry, it is again whipped and shaken to restore the light, soft texture, and to remove the glazed sleek appearance.
TRUE VERSUS TRADE NAMES

Centuries hence, historians in describing costumes, would be justified in calling our present period the "Fur Age," owing to the extravagant and prodigal use of furs for garments and adornment. The sources of wild fur are limited, and fur farms cannot provide the variety and numbers of pelts needed. This excessive demand has brought about a marked change in the fur markets. Today every pelt has market value, even as wheat has.

The science and the art of the modern fur dresser and manufacturer have been devoted to the task of making skins that formerly had no value into masterpieces. This means that man can take the most common, unattractive skins, dress them, and provide the consumer with a good looking product. These processes are laborious; they necessitate the employment of highly skilled labor, and expensive equipment.

The average consumer does not know or care about the source or finishing processes used on the fur. She is interested in the style, becomingness, and cost, giving little thought to the durability or real value of her purchase. This ignorance and indifference is partly responsible for the use of substitutes and imitations in furs. Some few folk do know and care about real quality, discriminating between the genuine and the imitation.

This condition has made it necessary for scrupulous dealers to protect themselves from the disreputable fur-
riers. The future of the furrier's business was involved; his integrity was at stake. The National Association of the Fur Industry, composed of men in all phases of the industry, has adopted an ethical code, designed to protect the legitimate furrier and the public. The National Association of the Fur Trade Industry has followed the London Fur Trade Association with reference to principles of salesmanship and advertising.

These organizations are also affected by the recent rulings of the Federal Trade Commissions, which has outlawed the use of misleading "trade names." In brief the ruling is as follows:

Resolved:

I. That in order to describe a fur, in every case the correct name of the fur must be the last name of the description; and if any dye or blend is used, simulating another fur, the word "dyed" or "blended" must be inserted between the name signifying the fur that is simulated, and the true name of the fur; as "Seal-dyed-muskrat" or "Mink-dyed-marmot."

II. All furs shaded, blended, tipped, dyed or pointed, must be described as such: as, "Black-dyed-fox," or "Pointed Fox."

III. When the name of any country or section is used, it shall be the actual country of the origin of the fur, as: "American Opossum." Where the name of a country or place is
used to designate a color, the fact shall be indicated, as:
"Sitka-dyed-fox."

IV. Where goods are sold under a registered Trade
Mark, that trade mark should not, by intent or otherwise,
be capable of misinterpretation by the public. In the case
of trade marks heretofore established in common use, the
advertiser should invariably indicate by suitable descrip-
tive matter, in addition to the trade mark, just what the
fur is; or better, the trade mark should be modified so as
to include the descriptive matter."

We recognize that it is not always possible to describe
a fur in terms sufficiently brief for practical purposes.
Indeed it is this fact which has led to the use of "Trade
Names" that are frequently misleading. "Hudson Seal" pro-
perly described would be "Seal-dyed-sheared-muskrat." We
believe that the term "Seal-dyed-muskrat" will meet all
practical requirements, on the principle that the object is
to inform the public what the fur really is, rather than
what processes it has gone through."

The consumer should always request the label, stating
the true name and trade name of the fur in question. This
would protect him, and encourage the dealer to comply with
the Interstate Commission's ruling.

All grades and kinds of pelts are used in a furrier's
business. "Pointed" fox may be sold as silver fox, or rab-
bit may pass for fur seal. A discussion of the use and
abuse of this system will best illustrate this aspect of the industry.

Fur seals had been nearly exterminated, and only the timely interference of the American and European governments prevented their total extinction. During the years that true seal was not available or was too high priced, substitutes were used. This led to the common and accepted use of the term Hudson seal, which is the name given to seal-dyed-sheared-muskrats.

Since Hudson seal has become one of the standards of value in furs, it is being extensively imitated. The next step has been to use the hare, cony or rabbit, instead of muskrat skins, because of the higher cost and shortage of the muskrat skins. These others can be prepared and sold cheaper than the Hudson seal, although the ultimate cost is probably higher.

Hare is the name given to the European rabbit, which is also known as cony. These pelts have thick fine hair, but weak leather, whereas the muskrat has both good fur and strong leather. Garments made of seal-dyed-sheared-rabbit, used as imitations of Hudson seal, may be as attractive in appearance, but are without the leather strength.

It is interesting to note that the so-called seal is sold under many names, among them Baltic Seal, Bay Seal, Buck Seal, Buckskin Seal, Chipped Seal, Coast Seal, French Seal, Hudson Bay Seal, Le Meuse Seal, Near Seal Muskratine,
Northern Seal, Electric Seal, Polo Seal, New Zealand Seal, Polar Seal, Red River Seal, Seal Musquash, Sealette and Sealine.

Nutria, also called coypu, is commonly known as the South American beaver. The pelt has lovely, full, fine fur on the belly, though the back is of a poor quality, and it has weak leather. This pelt is often sold as North American beaver, or as Nutria-Seal, for seal; Rabbit and hare are nutria-dyed and sheared and sold as Nutriette, Nu Nutria, and Nutria.

The lowly hare is again transformed and paraded as Baltic Black Fox, Baltic Brown Fox, Baltic Leopard, Baltic Tiger, or French Leopard. The term Baltic White Fox is the improper name given to the natural white Coy or Belgian hare. Bluette is a term applied to blue-dyed-rabbit and sold as fox.

Probably the hare and rabbit are more freely used than other pelts for substitutes because the quality of fur permits such varied successful dressings and dyeings. There are many trade names given to these products; some of the more consistently used are listed as seal, beaver, lynx, fox, leopard, chinchilla, ermilete, erminette, cocaalette, cony seal, Jap rabbit, leopardine, Mendoza beaver, Nu Nutria, Russian taupe fox, squirrelette, French sable, Galland squirrel, hair sable, Kit fox, Visconette, Minkony, Moline and Geller seal.
The term genet is used to designate the pelt of a European animal of that name, also the natural black domestic cat skin. Dyed cat skin now sells better as genet. We find many furs of this name on the market, some of which pass for ermine, cony, beaver or seal.

Long-furred pelts are also to be considered in this discussion. Again the consumer is thinking of furs with reference to appearance and cost, rather than durability and suitability and cost. American Opossum is dressed and dyed, and the public buys it as Russian Black Martin, Russian Brown Martin, Russian Martin, Russian Skunk Martin, or Russian Stone Martin. The coyote and Wolf are used as fox.

The popularity of Persian lamb and caracul has led to the use of many species of goat and sheep skins to supply the demand. Perhaps the best known of these is the slink (of the sheep family.) The skins are taken from the still-born lambs or those dying or killed soon after birth. These skins are dyed, sheared and improperly sold as American broad tail, or broad tail lamb. If dyed grey and blue this fur is called Krimmer lamb or krimmer. If dyed black it is improperly called Persian, Shiraz or Astrachan. True Persian lamb is obtained chiefly from the Karakul sheep, which is a native of Bokhara. This lamb has silky, lightly curved hair, usually black. Afghan and Shiraz and many other species have a coarser curl and are more woolly.

"Moufflon" as a trade name has been established some
fifty years to describe certain members of the goat family found in Northern China, Southern Russia and Mongolia. The fur is long, heavy and somewhat curly. These pelts are plucked and dressed, leaving the long, soft, silky under fur. The skin is then processed to remove all curl or waviness from the hair. The Moufflon is sold under its trade name and as imitations. The Thibet, a member of the sheep family, and the Iceland lamb, also having long fine silky hair, are processed to remove the curl, then sold as Iceland fox. If these pelts are exposed to moisture the processing is lost, and the curl returns to the hair. The inexpensive so-called white fox summer scarfs are made from comes under these three groups of furs.

The little darting squirrel would have difficulty in recognizing the skins of his kin. The white bellies are sold as ermine. When dyed they are sold as summer ermine, chinchilla squirrel and sable. Even the squirrel itself is not free from imitation, for squirrel-dyed-sheared rabbit is sold as squirreline and squirrelette.

The time has come when the leopard can change his spots. The fur dyer takes the pony skin, and the debutante buys a leopard coat. Calfskin has come into its own, since there is not a sufficient number of pony skins to supply the demand. This increased use of the calf skin has led to a shortage of this commodity, which in turn is met by using sheared cow hides.
One might go on indefinitely showing how the furrier is attempting to meet the increased demand for furs. One must admit that the once ignored pelt has its place in the economic realm of modern living. Dame Fashion will not be denied her furs, and as long as she upholds this demand, the use of the lowly pelt will be sustained.

The monkey who furnishes the fringes of hair for the grand dame's Paris coat, never saw an organ grinder. His fur-dom is often usurped by the unromantic and cheaper animal, the lowly billy goat.

The skin of the gazelle is sometimes dyed to imitate mink, sable, leopard and giraffe. While kid skin is often stenciled or painted to imitate leopard and giraffe, it is also dyed in an attempt to copy the lizard and fancy patterns.

It is thus apparent that in buying furs one should patronize a reputable dealer, from whom can be learned something of the real source and qualities of the furs purchased.
PURCHASE AND CARE OF FURS.

Expenditure. Furs may be judged upon the basis of the amount of satisfaction that a person may receive from owning and wearing them. Formerly a mink coat was treasured and passed down from mother to daughter. Today for the average person, a coat is not a life-time investment. It is used daily, and not kept for state occasions. The fact that a fur coat can be repaired and remodeled is an economic factor. When past its use as a garment, parts of the fur may be cut and used as trimmings.

The Wearing Quality. Wearing quality is a relative matter because furs are not alike and because of differences in users. Since no two skins are identical, furs have to be graded; we usually find them sold as first, second, third and fourth grades. Obviously the skins of the first grade should give better service than those of the fourth grade. A first-grade skin will be prime, well-dressed and dyed, and well manufactured, and should give the service attributed to this species of fur.

Since the quality of fur is determined by the durability of the leather, the length and texture of the fur, one cannot expect furs to give equal service. The tables at the heading of this section will show the comparative values of the better known skins.

Inasmuch as the consumer knows what use she wishes to make of her furs, she should consult with the furrier con-
arning her needs. He will advise her as to the furs which will withstand hard usage, or give moderate wear, or require careful handling. He will tell her to buy furs having rather hard stiff hair, if she wants a service garment, recommending that she choose Alaskan sealskin, seal-dyed muskrat, or mink, skunk, dogskin or wolf. Raccoon, which is normally a durable fur, will show wear very quickly if used for motoring; the long guard hair of the raccoon wears off when constantly rubbed back and forth against the cushions of the car.

Furs which will give moderate wear, unless subjected to extremely rough usage, include Alaska seal, Civet, Ermine, Kolinsky, Russian calf and American Opossum. If trimming and neck wear furs are considered, many others might be added to this list. Furs that are chosen because of their rare beauty, their scarcity, or because of high costs, may include the more delicate and perishable furs. Oftentimes the very fragile character of the fur lends charm and beauty. One should recognize these factors when choosing a garment, and when wearing it one must be especially careful to avoid rubbing or friction against the fur. Hats with stiff rigid brims will cut the long, delicate hair of the fur. Fox scarfs are particularly likely to be injured in this way. A scarf worn loosely about the throat will be worn by the movements of the head. Garments should never be drawn tightly for this will cause undue strain on the seams, caus-
ing tears or rips in the leather. Of course motoring, especially driving, subjects a coat to constant strain and friction.

There are so many pseudo and novelty furs on the market that even experienced furriers will not presume to judge of their value other than to explain that "time will tell." If a buyer knows the original fur that has been modeled, however, she can judge something of the service that that fur ought to give.

**The Becomingness of Fur.** Becoming furs flatter folk by softening the lines of the face; furs seem to revive the freshness of the skin by concealing the skin shadows. One should therefore choose furs that are becoming in color and texture. The Dresden type would select a fine, soft, silky fur that would harmonize with her personality. In contrast, the debutante may choose a bold, striking garment because she has the youth that dares to carry extremes. The pale, colorless woman should select a fur that will be becoming to her complexion, while the white-haired woman should usually seek the contrast afforded by black or a dark grey. The high-colored brunette may use a contrast, such as black marten, skunk, or mole. A light-haired woman must be careful to select a color that will not cause her hair to "fade out," while a brown-haired person will probably look well in beaver, stone marten or sable colorings.

Color is chosen usually for its pleasing qualities and
in accordance with the wearer's taste, not because of its wearing values. It is known, however, that dyed furs do not have the same wearing values found in the same quality when natural; and that natural furs may fade with age or exposure to sunlight.

Furs are also judged by the gloss and luster of the hair. The fox, which has the highest luster and the most "life" in the hair, is always preferred. The sheen on the seal, the mink or sable appeals to the judge as well as to the consumer of furs.

The texture of fur affects to some degree the luster and gloss. Fine, silky hair reflects the high lights better than coarse, stiff hair. Finer pelts such as fox, marten, sable, lynx, and fisher are known for their luster. The texture is also a factor governing the class of fur that different types of women may wear. Furs should be selected with reference to their becomingness and suitability. A slender, tall woman may wisely choose long-haired furs, because the depth and softness of the fur will tend to increase her apparent size and soften the lines of her face. She may wear large collars and deep cuffs or a border of fur—contrasting texture and color may be used. She is also fortunate in that she can wear the furs that have been worked out with horizontal or diagonal patterns.

The short little woman tending toward stoutness must avoid furs that will add pounds to her appearance and make
her appear like a brownie. Furs with short hair, preferably those with hair that lies flat, are suitable for this type of woman. She should avoid large collars and deep cuffs, especially of contrasting color or texture. She looks best in soft, supple furs made up in long unbroken lines.

The college girl will probably choose her garment for all around service, so she will select quite a servicable sports model of Raccoon, Hudson seal, Caracul, Krimmer or Muskrat. Her grandmother's furs will be chosen for elegance, distinctiveness, charm, beauty and becomingness, rather than for mere servicability. Probably the mature woman will wear her coat with gentle care, so that she may satisfy her longings, while the young girl will expect to repeat her adventures in buying a fur many times.

I find furriers to be the most modest class of merchants. They repeatedly say "I believe this to be"—one rarely hears them say "I know." When asked about this, one Portland merchant replied, "One may spend a lifetime handling furs, yet hardly begin to know them, because no two furs are alike, and different furs are constantly being placed upon the market. The modern science and art of dressing and dyeing is improving, so that we must keep pace."

Knowing this, how can an untrained consumer expect to step into a store, spend a few hours looking at fur and make a "best" choice. I know of no class of salespeople who are so ready to tell the whole truth about their goods if the
customer wishes the information. They will aid you in every possible way by giving you facts concerning the source, manufacturing processes and probable durability of the fur. By considering the initial cost of the garment, and the up-keep, one oftentimes finds that the so-called "expensive buy" is the cheaper garment.

Since the public is so ignorant of fur values, it should always trade with the reputable fur dealers. Well-established firms that are known because of business integrity should be patronized.

The "fly by night" merchant may establish himself in a shop and conduct an apparently honorable business, but when a coat needs "servicing" he is not there.

Peddlers may come to your home or office whispering tales about a "wonderful smuggled bargain," or tell you that they have been authorized by the "Royal Siberian Fur Company, Inc." to show you their goods. Often investigation will reveal that they have purchased their furs, usually "seconds," from houses that are "fly by nights" or are not reputable firms.

Buy at Home from your local dealer. He is established in your community and wishes to keep your trade and your good will. He will therefore give fairer treatment and quote more conservative prices than are obtainable in strange cities.

Quality of Furs. The pelts worked up by the American
The fur industry are the equal or superior of any foreign-purchased furs. The fur industry of this country can produce anything that one could wish to buy.

**Tariffs.** There are no tariffs on raw furs excepting for the silver fox and black fox. These are dutiable at 50 per cent ad valorem raw or dressed.

Dressed skins or fur garments are brought in with 40 per cent ad valorem tax. This offsets any price advantages when purchases are made abroad. One commonly hears of the numerous attempts made to smuggle furs through customs. Women have been known to put old linings into coats, in an effort to escape duty. A heavy fine is the lot of a convicted offender.

**American Fur Markets.** Since the recent war the world's fur center has moved to the New World. There is a greater supply and variety of furs than ever shown here before.

**Style.** American designers are alive to the pulse of fashions abroad. They know the tendencies and needs of the American women. These designers adapt fashions and make adjustments in styles for these patrons. Such service contributes greatly to the title "The Best Dressed Women of the World."

**Price.** Furs are expensive or cheap, depending on the pelt itself and the consumer's budget. The market can supply furs of the costly class medium priced, or the inexpensive imitations, according to the demands of the consumer.
Fur Service. Merchants service radios, watches, cars; why not fur? As a matter of fact any reputable dealer will close a sale with the statement, "If any rips or defects show up when you wear this garment, please bring it back so that we may repair it." If furs are purchased from one's home merchant one has the advantage of his interest in his sale, and such furs are given free service. Since furs purchased abroad do not always receive the same attention, there will ultimately be repair bills.

Fur Peddlers. Reputable firms guard their business integrity jealously. Such firms include the well-known establishments of Revillion Freres, opened in France in 1723, Hudson's Bay Companies, or Liebes of the Pacific coast cities. These men are contending against unscrupulous peddlers or merchants. Peddlers obtain their furs from unverified sources and attempt to sell them by house-to-house or person-to-person canvassing. One such man sold cheap coyote for first grade red fox in the Williamette Valley, with handsome profits. The peddler may say that he is representing a reliable firm. One can obtain the facts from the Better Business Bureau of the town. Other salesmen will rent a hotel show room in order to give their dealings the semblance of honesty. Still others do telephone advertising or use the mails to prick the curiosity of the possible customer. "Fly-by-night" stores are never to be trusted. Such a store opens up, advertises, and draws in gullible
patrons. After having exhausted this source of business, the firm closes out and leaves town. Persons having purchased furs from a fly-by-night store cannot get the service that they are entitled to. In case the furs have been misrepresented they have little or no recourse in having the matter made right.

Advertising which carries the legend "Buy of us, get wholesale prices" should be questioned. There are legitimate overhead expenses involved in merchandising, and retail firms cannot afford to sell at wholesale prices. Competition is too keen to permit much under-cutting of prices. If in doubt about the firm, one should call up the Advertising Bureau or the Better Business Bureau for facts concerning the firm that is doing the advertising.

Early English records show that there were unscrupulous furriers in 1382, for we are told "that the same charter which placed the Worshipful Company of Skinners on an equal plane with eleven other English trade guilds also imposed severe penalties for any handlers of peltry found guilty of attempting to defraud buyers." It is told that "misrepresentation of furs had reached such a point as to be scandalous. Among the deceits practiced were the sale of old and worn skins as new. The charter stipulated that skins used were to be of certain size, thereby placing an end to the business of cutting a large-sized skin into two small ones."

The National Association of Furriers have adopted a
code of ethics for the protection of the furrier and his customer. The principles embodied in the code include:

1. To sell the fur for what it is; no misbranding.
2. To tell the true values of the fur.
3. To buy and sell only Prime pelts.
4. To sell properly dressed and dyed pelts.
5. To give an honest opinion of the probable wearing values of the fur.
6. To teach the customers how to judge the quality, appearance and durability of the fur in question.
7. Never to "rush" a sale. Give the prospective customer a chance to be a "satisfied customer."
8. To employ legitimate advertising thru first-class magazines and papers, style shows, window displays, on the screen, over the radio, and by letter.

Furs, like other merchandise, may be sold in either luxurious or modest sales rooms. The customer knows that he must pay for service in accordance with the style of the shop. One should expect to find legitimate differences in price due to differences in overhead.

It is a common custom to have August fur sales. Summer repairing is cheaper because the furrier wants to keep his shop employees busy. The furrier wants to move stock, also to advertise his fall stock, and to keep money in circulation.

There are good and poor fur sales. The legitimate
sale, when the furrier uses some one fur as a leader, or when he chooses to discount all furs to move them, is worth consideration. Sales of shop-worn goods for out-of-season or old-style goods may be held. Generally expensive furs can be remodeled in a new style and sold at a better profit than if sold as old style. One rarely finds "old-fashioned new" furs.

The installment buyers sometimes fail to keep their fur coats. These coats may be cleaned and relined and sold as shopworn, or new, or as second hand. Many people are buying furs on credit today, using the installment systems of payment. This is especially true of the cheaper coats worn by the younger working women.

Some merchants protect themselves from the return-goods evil by sealing the tag as it is attached to the garment. Many instances are known of people ordering a handsome fur garment before some great social function, only to return it a few days later with evidences of having been worn.
FUR STORAGE AND CARE

Dirt and the moths will take their toll of rare and of cheap furs alike. Furs should always be cleaned before they are stored—preferably 3 or 4 times a year. Dermatosis is sometimes due to an infection from soiled furs, just as it is from soiled clothing.

Commercial storage is carried on in several ways. The furrier usually has his own storage vaults, which are kept at a low temperature. He will clean the furs before storing them, thus removing the dirt and possibly larvae. Cold storage is considered the best method. The customer should ascertain whether this storage includes protection from fire, moths, water, theft or burglary. The cost of storage is based on the value of the furs. Get a receipt, and keep it!

Fur is a dust catcher owing to the depth and thickness of the fur. Fur is thickest next to the cuticule. The professional cleaner has facilities for cleaning furs. He can save much of the wear on the fur incident to cleaning. He cleans without robbing the leather and the fur of their natural oil. He can "drum" the dirt out, and completes his task with the necessary "processing."

Home Storage. Housewives should not attempt to clean furs. The ordinary cleaning agents such as gasoline, ether or benzine, not only remove the dirt, but the natural oils from the furs. When ready to store furs, aerate them in the
breeze in a shady place. Then place the furs in newspaper bags that are sealed on the edges. Since moths do not like printers' ink, they are less likely to enter a newspaper package. Storage bags may be purchased, but do not keep moths out any more efficiently than the home-made bags.

Cedar-wood or camphor-wood chests are ideal for fur storage. Cedar shavings or naphthaline flakes may be rubbed into the furs. It is best to take the home-stored furs out once a month, or oftener, to be sure that they are safe. Furs thus stored are likely to become dry and lose their luster on account of being stored in a too warm and uneven temperature.

One should remember that moths attack natural furs more quickly than dyed furs. These have more oil in the follicles than the dyed articles. The moth lays her eggs in the fur, and it is the larva that hatches and eats his fill of the fats around the hair roots, causing the hair to drop out. The best moth preventives are light, air and frequent shakings.

The care of fur when in use adds or detracts from its wearing value. If the fur is wet or moist, place it on a hanger, and hang it in a room where there is a current of air, as far away as possible from the radiator, register or stove. After the fur is dry, shake and fluff the fur. If badly matted it can be carefully combed and brushed. Brushing may cause some of the fur to come out. Always shake
furs, before wearing them, to fluff the fur.

Hang furs on suitable hangers, never on a nail or hook. Give the garment ample space in the closet, so that it is not crowded or jammed. Oftentimes the closets of an apartment are too dry for the good of the fur. In such an instance a basin of water may be kept on the floor of the closet to provide the necessary humidity.
IDENTIFICATION OF FURS.

American Broadtail

American Broadtail is obtained from domestic lambs from South America. The wool is sheared short, and the pelt is passed through embossing machines which produce the broad-tail pattern. This is a popular fur, fairly durable, and comes in a variety of colorings; it is not clumsy in appearance.

Badger

In olden days, the English sportsman had his captive badgers, whose teeth had been removed. Dogs were loosed upon the badgers when sport was desired, and it is said the term to "badger" or "bully" originated at this time.

The pelt today is used for fur and for brushes. When needed for the latter use, the skins are shaved on the flesh side, washed in alkali to remove the grease, and the hair cut off close to the skin. The hair is then asserted according to length. The longest hair is used for printing brushes, the medium for shaving brushes, and the shortest is manufactured into tooth brushes.

The best badger skins are obtained from the American species found on the prairies of North America. They are called Mishtumisk by the Indians. The pelts have a rather coarse, thick under wool of pale faun or stone color. The long top hair, which is 3 to 4 inches in length and black and white in color, renders the fur hard wearing. This is
one of the few furs that are darker on the belly than on the back.

The badger pelt may be prime, yet have such short, thin fur that it has no pelt value. The opossum is the only other pelt that may be worthless although prime.

Japanese, Russian and Prussian badgers have coarser, darker pelts. These may be used by furriers. When used for fur, the Japanese species is dyed and used as an imitation for skunk. The American badger is usually used in its natural coloring. It is classed among the very durable furs.

Badgers formerly sold for a few cents; today the price ranges from $30.00 to $40.00. The main use of the some 160,000 pelts taken annually is for brush manufacture.

 Баум or Fine Marten

Like all other members of the Marten family the young are born naked, but have a well-furred coat when five to six weeks old. Since Marten is the first fur to "prime up" in the fall, it is caught early in the open season. Skins taken in the highest altitudes have the thickest, finest fur.

The Baum Marten when dressed is sixteen by five inches. The Baum Marten is found in the forests of Russia, Norway, Germany and Switzerland. The pelage has a thick under fur and the top hair is rich warm brown on the tip ends, with whitish under fur, and having a yellow or orange patch on the throat. This pelt is used either natural or dyed. When
well blended it is difficult to distinguish it from the best grade of the natural; it is also blended to imitate Russian Sable and Hudson's Bay Sable, for which it is an excellent substitute.

Since Japanese Sable is yellow, a trying and unbecoming color in furs, it is always dyed or blended in the dark Sable colorings.

The best grades of Baum Marten are imported from Norway; these have the darkest, richest coloring and the fullest, finest fur.

The Baum Marten compares favorably with Russian Sable in durability. It is used extensively as a substitute for Russian Sable and American Sable. The Japanese Marten, dyed is a fairly good substitute for Hudson's Bay Sable. It is a reasonably durable skin and less expensive.

Bear

The four common varieties sought by hunters are the Brown, Black, Grizzly and White Bears.

Of these the Black Bear cub pelt is the only kind used for women's furs. This has long, thick hair and is very durable.

Bear skins are commonly used for floor rugs and automobile robes. The caps of the guards of the British army are made of bear skin.

Beaver

The Beaver, which is the largest of the rodents, pro-
bably has the most interesting and varied history of any of the fur-bearing animals. It is said to have an almost human intelligence, and its instinct is often better than human judgment. Its industry is proverbial.

The beaver is a completely aquatic animal. The beaver, like the otter, muskrat and mink, has darker richer coloring if his habitat is clear water. Lighter-colored skins are obtained from grassy or swampy sections. This animal loves sunshine, and spends hours basking in its rays during March and April. This causes the fur to become hooked and crinkly on the ends, as if singed by a hot iron.

Beaver is valuable for fur and for the castorium, a secretion that resembles sealing wax, obtained from the castors of both sexes. This is used in the manufacture of perfumes. Trappers also use the castorium on their bait lines to lure the fur-bearing animals. Beaver flesh is considered a great delicacy. In pioneer days it was a staple meat as well as a delicacy in the menu.

In earlier times the beaver had a very stable value. Many stories are told of the exchange or barter value of beaver skins. Peterson gives the following list obtained from records of the Hudson Bay Company dated 1670.

Guns ——— 13 winter beaver skins for largest.
Guns ——— 10 winter beaver skins for smallest.
Powder ——— 1 winter beaver skin for one-half pound
Shot ——— 1 winter beaver skin for four pounds.
Hatchets ——— 1 winter beaver skin for one great and one little hatchet.
Knives ——— 1 beaver skin, for 8 great knives and 8 jack knives.
Beads ——— 1 beaver skin for one-half pound.
Laced coats — 6 winter beaver skins for one.
Plain coats — 5 winter beaver skins for one red coat.
Coats for men laced, 6 yards
Coats for men plain
Tobacco ——— 1 beaver skin for one pound.
Powder Horn — 1 beaver skin for 1 large and 1 small horn.
Kettles ——— 1 beaver skin for a one pound kettle.
Looking glass and comb

The story is told that in the extreme outpost regions the custom prevailed of standing a gun on end; beaver skins piled to the height of the gun were paid for the gun. This is said to be the reason that the long guns were used when shorter ones served just as well for guns. In the early days beaver skin was worth so many muskrats, or it took so many skins to buy an otter, seal or sable.

The crest of the Canadian coat of arms is an indication
of the place of beaver in her history.

Originally beaver was used almost exclusively for felt. Hence the term "castor," which used to be slang for a top hat. In later years pelts that were rubbed or defective were used for the hatter's industry and the better pelts were converted into furs. Beaver skins used to be sold by the pound, a properly fleshed large skin weighing a pound and a half. Beavers used by furriers today are trapped in the open, for beaver fur-farming is not established as a commercially profitable venture.

The pelt of the beaver varies in color, quality of the fur and thickness of the skin. There is less difference due to primeness than is usual with other species. The under fur is fine, thick and soft, about one inch long, of a greyish or mouse brown color. The fur is shorter and denser on the belly than on the back. The top or "water" hairs are heavy and stiff, from two to three inches long. This pelage is known as the best of all waterproof coverings.

Variation in the colorings of the pelage is mainly due to habitat. The lightest-colored pelts come from Oregon and the Rocky Mountain sections and have poorer fur. Beavers obtained from Mexico, Arizona and other southern states are heavy in the leather and pale in color. The most valuable skins are obtained in the Fort York district, along the Moose river, and in the Hudson's Bay region. The colors of these pelts range from whitish to brownish black.
When dressed the skin is judged by the depth, thickness, silkiness and luster of the fur, and whether the guard hairs were plucked or sheared.

The process of dyeing is likely to make the leather tender. Seal-dyed beaver is therefore not recommended for durability. There is more gamble attached to buying raw beaver pelts and having them dressed than is generally known. Unless the pelts are prime and have been properly cared for, they are likely to "slip"—i.e., the pelage will all drop out during the tanning process.

The State Game Laws are being enforced, and it is hoped that the beavers will not be trapped until they are exterminated. In the meantime the government is working on the problem of successful beaver fur farming. The furrier and milady may therefore look forward to a more plentiful supply of this handsome, very durable fur.

Broadtail

This name is given to lamb skins taken from lambs that are still-born or killed immediately after birth. The idea still prevails in some quarters that the ewes are killed in order to get the pelts of the unborn lambs. This would be commercially unprofitable and is not done.

The Broadtail is a small skin, measuring about 10 by 5 inches. The leather is very delicate. The fur, which is short, lies flat in a wavy pattern instead of curls. The markings are distinctive and appear like moire. It is said
that the weaver's attempt to reproduce the Broadtail pattern in fabric is the origin of moire.

Cat (Genet)

The domestic cat and the wild cats furnish millions of pelts annually for the furriers to work up. The demand for this fur has increased many-fold since the recent war, and it is now for the first time having definite place in the fur salesroom.

Commercially speaking, the best pelts are imported from Holland and Russia. These measure about 18" by 9" when dressed.

The wild species has a coarser, stiffer hair than the domestic animal. Its fur is thicker, longer and heavier. The cat has a fur that is thicker and heavier on the head and shoulders as a protection for the male when fighting. It has a line of bristly hair running down its back which has to be cut out when the pelt is to be manufactured into garments. The domestic cat fur is likely to be singed by stove heat, so it is less desirable than that of the wild cat. All cat fur is likely to shed or drop out. The hair itself is weak, although the leather is reasonably strong.

In the trade, a natural black cat pelt is known as genet. In the fur market, genet ranks first; grey Cyper or tabby, second; other colors and markings are third. The skins from North American cats though larger are of an inferior quality. The English pelts though small have a finer
quality. Many domestic species, such as the Angora or Manx, have no fur value.

Genet or cat fur bleaches and dyes well, so is made to serve in numerous capacities, as a genuine fur and as substitutes or adulterants for better grades of fur.

All cat furs wear out quickly. The hair cannot stand continued friction and sheds continuously. The leather is fairly durable.

During the middle ages when fur was so commonly used for trimmings, a canon issued in 1227 forbade an abbess or nun to wear any more costly fur than that of lambs or cats.

Chinchilla

The chinchilla has been hunted for ages past. The Incas used the fur for clothing, and the long guard hairs were used in spinning and weaving. The fur was prized highly by the ancient Peruvians.

About forty years ago, Bastard Chinchilla skins sold for as little as from $10.00 to $12.00 a dozen, while the finest real chinchilla could be purchased at $13.00 each, and the chinchillone at $3.00 each. Today the prices are upwards of $50.00 to $60.00 per dozen for bastards, $7.00 to $15.00 each for chinchillones, and the real chinchilla, extra fine, $150.00 or more. This makes the fur, when working area considered, as expensive as Russian sable.

The best of the real chinchilla comes from the high mountain region of Bolivia, Argentina, Peru and Chili. Un-
controlled trapping has nearly exterminated the chinchilla, and it is hoped that the government laws will protect the few that are left, and that some day they may again become plentiful.

The real chinchilla fur is said to be the most velvety and silky in texture of any fur. The chinchilla has a soft fur about one inch long on the sides. The general color varies from ash to clay yellow, silvery and even a light brown. Apparently the variation is due to its habitat and the season. The leather is almost as thin as tissue paper and equally tender. The fur is very delicate and must be handled carefully because so little friction will ruin it.

In spite of the beauty, Sacho questions whether a sufficient number of skins, at any price, could be found on the market to make a coat.

There are no good imitations of chinchilla. Although squirrel is sometimes used for this purpose, no one should be deceived by it.

The chinchillones are larger than the real chinchilla. They have a rather scraggly, coarser fur, which has a yellow tinge instead of the beautiful, clear blue-grey of the chinchilla.

The so-called bastard chinchilla comes from the La Plata valley. These are smaller than chinchillas because they are found in a warmer climate and lower altitude. Their fur is shorter and less beautiful because it is dark-
er and not so clear colored underneath.

**Civet**

This animal is the little striped skunk, and it is a misnomer to call it civet except that it is an established trade name.

The pelt is small, some 4 by 6 inches in size. The fur is dense, soft and silky, and from 3/4 to 1 inches long. The leather is rather tender and not durable. The color is black, with white markings in the form of an Irish lyre.

This animal is caught also for the musky substance which it secretes, used in the perfume industry.

The civet is rarely dyed. Instead the furrier works the pelts up so as to use the natural marking to produce his design.

This fur is used especially for sports garments because of its striking colorings and markings. It is a popular-priced fur. The fur is only fairly durable.

**Ermine**

Probably more conflicting stories are told about the ermine than any other of the small fur-bearers. It is acknowledged to be the most important member of the weasel family and should be designated as the stoat or greater weasel. Fur from the common weasel is often sold as ermine, but the winter coat of the stoat is the only true ermine.

The ermine prized most for its fur is caught in the region of Yakutsh. Ermine are also found in other sections
of Siberia, Russia and America. The best grades of American ermine are better than the medium Russian grades.

This animal is known for its protective coloring. In the summer the back turns tan, brown or greyish and the belly is white. In the winter its coat turns white except the black tip on its tail.

The best skins are white and free from yellowish tinge and stain. Skins from the coldest regions seem to be bleached the whitest.

The skin is small, being only about four by ten inches. The under fur is fine, soft and thick with a longer, crisp—almost stubby top fur. This top fur has a decided "grain," and cannot be stroked successfully and smoothly in the wrong direction. Even the youngest pelts have this characteristic. This is a useful fact to know when one is trying to detect the imitation ermines, for most of them are made from sheared rabbit, which can be stroked in any direction. The skin, though thin, is tough and durable. Some ermine tails are only tipped with black, others are black halfway up.

When ermine is made up of the white pelts with black spots of fur introduced, it is known as "miniver." True ermine always has the black tipped tails worked in.

Ermine is associated with royalty. In olden days common folk could not own or wear ermine. It is extremely popular today for evening or full-dress usage.

Ermine should be stored in a dark place to prevent its
turning a yellowish color.

**Fisher**

The Fisher is the largest member of the marten family. It is also known as the Fisher Marten and Pekien. The pelt dresses about 30 by 18 inches, with a full tail measuring 12 to 18 inches in length.

The best quality of Fisher pelts are obtained from Canada. Before the break in the fur market came, practically all Fisher was exported to Russia. The fur is so handsome and durable that there is always a ready market for it.

The leather is strong and durable. The pelage is composed of a deep, thick under fur of dark coloring with fine dark glossy top hairs that are about two and a half inches longer than the under fur. The fur is not as soft, fine and silky as the marten, although the pelt is larger. It is not as valuable as the marten.

The colorings vary from a light tan to a dark brown or brownish black. The general coloring is a blackish-brown, becoming grey at the throat and head. These pelts are always sold with the brush attached. This fur is characterized by a pungent odor, though not strong like the skunk.

Choice raccoon skins are dyed and used as imitations of the Fisher.

**Fitch**

Fitch, also called Fitchet or Fitch cat, is the name given to the common pole cat of Europe. It is a member of
the weasel family, and has a pelt about three by twelve inches. The choicest skins are obtained from Germany. Choice furs are also imported from Denmark, Holland and Russia.

The pelt of the German Fitch has a fur about the same length as that of the Russian sable. It has a woolly yellow under fur, with long black, glossy top hairs. The Russian skins have white under fur, and the guard or top hair is lighter colored than that of the German Fitch.

Fitch is now being used extensively after a long period when it was not so fashionable. It is a rich-looking durable fur.

Perevitsky, the Samartian Mottled pole cat, is obtained from Siberia, Russia and Central Asia. This fur is orange-colored, with irregular brown spots on the back and glossy black on the back. This fur was in vogue fifty years ago and its popularity is being revived, now that all furs are in such demand.

Fox

There are some thirty trade names used when retailing fox pelts, but in this discussion, the distinct species will be considered. The fox is a carnivorous mammal, smaller than the wolf, having a long, slender muzzle, pointed ears and a bushy tail. Formerly all foxes were included in the genus Canis, but today they are placed in different genera, of which Vulpes is the most important.
There are four species of fox common to North America; the Grey Fox, Red Fox, Silver Fox, and the Artic, which includes the Blue and the White or Polar Fox. Some naturalists claim that the Black, Silver and Cross foxes all belong to the Canis fulvus, stating that the only difference is the color of the fur.

Fox farming for fur and breeding stock has become well established. There is a diversity of opinion concerning the value of the pelts obtained from farms located where the climate is mild. Most furriers believe that fur is better if taken from an animal that has lived in a cold climate. Fox farming has been exploited as a "sure money getter." The government bulletins are cautioning and advising prospective fox farmers in an effort to protect them from failure in the venture.

The foxes, in common, have long, silky, soft under wool, with longer lustrous top hair that flows. The brush—that is, the tail—is large and full furred. The fur is not durable; the top hairs break, and the under fur mats when worn, therefore shedding. The finer-furred pelts do not wear as well as the coarser furred. Usually fox fur is too dense, so the furrier "drops" the pelt by inserting several narrow strips of leather lengthwise of the pelt. This increases the size of the pelt and makes the fur appear more feathery like the lynx.

Fox brushes are not durable. It is difficult to skin
them off and to tan them. They are likely to break and will then hang like a broken whip stock. Furriers cannot guarantee the wear of a fox brush.

The color of the fox depends on the species, size, locality from which it came, the quality of the fur and its markings.

The Arctic White Fox, also called the Polar Fox, has a better colored pelt if found in the extreme northern regions. The long, silky, white hair is shaded with a light creamy color. The fur is luxuriant and fluffy. White Fox is freest of any of the foxes from the fox odor. All know of the "scent" of the English fox which is followed by the hounds. Belgian hare and Iceland goat are worked up into good looking substitutes at a very reasonable price.

Natural Blue Fox is a native of the Arctic regions. It has unusual smoky, ashen color, also described as bluish-mauve or slate-grey. The Blue Fox is not common. Owing to its peculiar color and luxuriant fur it is popular among the high-priced furs. Substitutes are obtained by using other colored foxes and dyeing them bluish-grey, or using young wolf-dyed; this is a more durable fur than the fox.

Red Fox is found in North America and abroad. It is a smaller animal, having a dark colored back and usually a lighter colored belly. The tail is long and bushy of lightish brown color, with a white tip, and black top hairs. Formerly the red fox was a medium of barter in Northeastern
Asia, even as beaver was in North America. Most of the Red Fox are dyed before being worked up by the furrier.

The Red Fox is rich fulvous, except for the white tipped guard hairs and white tipped tail. A gradual change of color, the increase of black and less of fulvous brings one to the silver fox or silver grey in which no fulvous appears. The North American Red Fox can always be distinguished from the old world species by the fur covering on the soles of his feet.

**Silver Foxes** range from grizzly to black, with few or many white banded guard hairs. This is one of the rarest animals, and has one of the richest and most costly furs known. The finest silver fox has a deep rich bluish smoke-colored pelt, with silver-banded guard hairs. Single skins range from $100 up to $2,500 each.

**Black Fox** is the rarest and most expensive of any of the fox pelts. If it is a true black fox it is all black except the white tip on the tail. The fur has exceptional luster and life. Dyed imitations of this rare fur are common. They are made by dyeing fox, wolf, lynx, coyote or hare black. Imitations should be much less expensive, while the dyed wolf and coyote are more durable.

**Cross Fox** is obtained from interbred stock. These pelts are common on the market. The Silver and Red foxes are used to produce the Cross pelt. The Cross pelt is more than the Red and less expensive than the Silver. Cross Fox-
es are usually of reddish or yellowish shade with darker fur
in the shape of a cross on the shoulders and a few silver
hairs toward the rump. This is costly as are other natural
fox furs.

Grey Fox is a species found only in the United States.
There are some 50,000 on the market annually. This is a
natural colored substitute for the costly silver fox. The
fur is coarser and shorter. It is popular and inexpensive,
though not durable.

Foxes from Kaumschatka are considered the best in qual-
ity of fur, depth and richness of red coloring. Some furr-
iers do not concur in this opinion and say the American spe-
cies is the best. Mongolia produces a few choice skins, but
most of the skins from China are coarse furred and yellowish
colored. The Japanese fox is similar to the Chinese, but
has a deeper coloring. Since the fox market prices stiffen-
ed, Japanese foxes are used more extensively. The Patagonia
fox is fairly good after dyeing. The Turkish Fox is iden-
tical with the Kitt fox and is sold more often than American
Kitt.

When buying Fox fur, one should consider the following:
1. The pelt should be perfectly and evenly furred all
over.
2. Fur should be reasonably long, lustrous, silky and
look alive.
3. The guard hairs, whether silver banded or black,
should be long, fine and silky and longer about the nape of the neck than elsewhere on the pelt.

4. The under fur should be abundant, soft and dark. The darker the better. Matted or wooly under fur is not desirable.

5. Brush should have a white tip of two to four inches.

6. Color should be clear, with no smutiness or deficiency in luster. No suggestion of rust giving a brownish or chocolate caste. It is now thought that this rust or tinge is hereditary and not due to food or sunlight.

7. Prime silver fox, should be black and silver, the glossy black shading to a blue black. Silver bands on the guard hairs should be bright; the color must be clear whether classed as black, extra dark silver, silver of pale silver.

8. Is the color natural, dyed or blended?

9. Is the pelt pointed?

10. Is the pelt "dropped?"

Goat

Furriers are not interested in the pelts of wild goats, so these skins are sold to the tanners, later to be sold as "kid" leather.

Domestic goats are raised chiefly by the Chinese and Russians. The pelts of these are referred to by a furrier when he talks of goat skins. China is exporting upwards of
7,000,000 goat skins annually. When the goat skins from Chekiang are dressed and the top hair removed, the skins are sold as "mouflon." They have about one-half the value of the Russian mouflon, of which some 300,000 are shipped annually from Kasan.

When prepared for export, the goat skins are made into "two skin rugs," "twenty skin crosses," or may be baled for sale.

The goats commonly sold are known as the Mongolian and Chinese pelts. The former has a soft, rather silky under hair which is attractive after the coarse, stiff, top hair is removed. The Chinese pelt is similar in texture and color, and when dyed it is sold as Kit Caracul.

Many of the Russian pelts are dyed black or brown, to be used for rugs. Frequently the brown-dyed pelts are used to imitate the brown bear.

Mouflon is dressed to remove the "woolly" appearance, but dampness and wear cause the wooly look to return. Wear also causes the fur to mat badly. Mouflon bleaches successfully, and can be used as a white fur. It also takes any color of dye well, and is used in a variety of colorings. One objection to goats' skins is that they retain their strong characteristic odor. This scent is not as strong in the kid or female pelt as in the male.

Mouflon is freely used by the ready to wear manufacturers for trimmings on the lower priced coats and suits. It
is an inexpensive fur that is quite durable.

The Angora goat is often confused with the Kashmir or Thibet goat. The Kashmir goat yields a long silky under fur which is combed out and used in the Kashmir shawls and cloth. The pelt of the Angora goat is used especially for baby sets, baby carriage robes, and children's furs. It is also used as a fringe, dyed or natural.

Hudson's Bay Sable

American or Brown Marten is known as Hudson's Bay Sable, although it is more like Pine Marten than Russian sable in color and habits. It is found in the forests to the north of the Hudson's Bay region. A few are also found in Labrador and Alaska.

This fur is on the market. Usually 1,000,000 pelts are taken annually. It has been observed that every tenth year is a period of scarcity and that this "lean" year is periodic. No one gives an authoritative reason for this phenomenon.

Pelts are best if caught during November when the coats are first prime. The fur value depends on the color, density and silky luster of the top hair, rather than the nature of the under wool. The Hudson's Bay Sable is brown with a reddish cast, the head and ears are greyish, and there is a yellow breast spot.

The Labrador Martens are large in size and have rich, fine fur. There are very few of these on the market. The
Alaska Marten is larger, has coarser fur and is lighter colored. The choicest skins are from the Fort George region and Eastern Maine. These are the best furred and darkest colored of the brown Martens.

This is one of the most expensive furs considering its size. The price ranges from $15 to $45 each. Hudson's Bay Sable is preferred by many to the Russian Sable because of the warmer coloring in the top hair. Sable is known as a durable fur and is frequently used by one generation after another in the same family.

Skins that are too light are blended to a rich, warm, reddish brown. Though less expensive, these are very handsome.

Iceland Sheep

This species has a long, soft, beautifully curled wool, which is composed of dense under wool and top hair. In Iceland it is customary to pull the wool from the sheep as it becomes loose in the late spring instead of shearing. This produces a better fur on the pelt.

This fur is dressed to remove the woolly appearance and then used as a substitute for white fox. It is not a durable fur and is much less expensive than fox. The fur is popular for summer wear.

Kangaroo

Kangaroos, for our purpose, may be grouped as the Red or Great Kangaroo and the Small Kangaroo. In the latter are
found the Blue Kangaroo, Wallaroo and Wallabies.

Skins from the adult Great Kangaroo have a harsh stiff hair with no under wool, which is not useful for fur. These skins are in great demand by the tanners for leather. The skins of the young Great Kangaroo are used by the furriers.

The pelt of the Blue Kangaroo is small, having long, silky, soft bluish-colored pelage. The under coat has a pinkish or bluish tinge. These pelts are choicer if taken from the female.

The Bush Wallaby has a grizzly fur that lies close to the body. This is frequently used as a substitute for raccoon. The smaller skins are used for fur, and the larger for linings.

The Swamp Wallaby has a fulvous coloring, and is usually dyed and then sold as skunk. It makes a good substitute for this attractive, durable fur.

The rarest and smallest of this group is the wallaroo, which is found in the hill country of Australia. Its fur is soft, long and silky. The male has a brown pelage, while the females are light grey.

The Kangaroo pelts, if fine, are used as trimmings and fur pieces; if coarser, for linings, gloves; the coarsest, for floor rugs, automobile robes or leathers.

Karakul

Karakul or Caraoul is the pelt from the Astrachan lamb. The finest of these skins are nearly as effective as broad-
tail, although they are not so fine in texture. This species is exported from the province of Astrachan at the rate of about 1,000,000 pelts annually.

The fur, which is a brownish black when the lamb is born, grows lighter in color. By the time the lamb is eight or nine months old, the fur is a natural light-grey color. The quality of the fur varies. The finest have a close, tight curl of silky lustrous hair. As the animal matures, the curl disappears, and the hair becomes coarser.

When working up these pelts in Europe and Asia for export the "paw" is removed, and these bits are sewn together by hand. They are then sold as "paw sheets" and used for the cheaper grades of coats. The seams have to be resewn on the machines before the fur can be used by our furriers, thus adding labor costs to what otherwise would be a cheap by-product.

The wool of this species when coarse and long is adapted to rough wear and is used to some extent for yarns to be woven into the Persian and Bokharen rugs.

Dr. O. C. Young, a breeder of Arabi sheep, says "The Tartars call the produce of any valuable fur bearing sheep Arabi. 'Arab' in Tartar means black; it is supposed that the name came originally from this source, as the word 'sheep' and this word are unknown in Arabia."

Peterson says that "the name Karakul literally means the 'Black Lake,' which is the name of the region where
Russian traders first bought fur-bearing sheep obtained from the herders of the Bokhara desert."

**Kolinsky**

The Kolinsky, commonly known as the Siberian mink, belongs to the Marten family. It is the cheapest of all the sables on the market. The best skins are from Siberia.

The pelt is about 2 1/2 inches by 12 inches. It has rather short, weak under hair, and the top hair is short. The leather is light weight. The fur is a uniform yellow color, which is a difficult color to use, so the fur is almost invariably dyed. When dyed it is sold as an imitation of marten and sable, just as the Japanese and Chinese Mink is dyed to make a cheap imitation for American blended mink.

The tails are used to make the sable "brushes" used by artists. Oftentimes the pelts and tails are sold separately.

Kolinsky is classed as moderately durable fur. It is becoming more and more fashionable, with corresponding increase in the cost.

**Krimmer**

Real krimmer is obtained from the gray lambs in Crimea. The fur has a bluish grey color, with a variety of curls. It is a handsome fur and if properly reinforced when manufactured is durable. There has been less true krimmer on the market since the war. Only 500,000 pelts are said to be available annually.
Leopard

The leopard is the largest spotted member of the cat family in the world. It was called Panther by the ancients.

The color and texture of the leopard fur depends largely on the species of leopard and its habitat.

The common Leopard is caught in the largest numbers in Africa and Asia. Some 10,000 are obtained annually in these sections. The Zulu kings wear a Kaross of leopard, which has the same place in their traditions that ermine holds among the European royalty.

The coloring ranges from a light tan to darker tans, marked with spots of black or having markings that are like open-ring rosettes.

The Black Leopard from Java, though rare, is so dark that the spots are hardly evident. In some of the Javanese species the fur is grey with contrasting spots.

The most important leopard pelt for the furrier comes from East India. This pelt has a long, rich, reddish or orange top hair, over the white under fur.

The ocelot is the largest leopard cat found in America. Some have striped markings while others are blotched like a tabby cat.

Fur taken from a leopard kitten may be soft, silky and brilliant and probably delicate. Otherwise, leopard skins taken from fully grown species are ranked as a durable fur that withstands hard wear.
Lynx

Some ten common species of lynx are caught for their pelts. All are distinguished by the long fringe of hair about the face, and the pencil of black hair that tip the ears. All have spotted fur and short tails. Variations in color and texture are due to the climate, locality, altitude and season. In the summer the lynx loses its under wool and its covering is the reddish brown top hair. If prime the pelt side of the skin is pure white with a clean waxy surface. If unprime the skin is spotted with brown, grey or black; in this event the pelt is worthless for fur or leather.

The winter pelt of the lynx consists of a deep, soft under wool, thinner than that of the fox; the top hair which is 4 1/2 to 5 inches long is fine, lustrous, silky and free flowing. The fur on the flanks and belly is longer, softer and whiter than on the back. The cheaper grades or seconds are rubbed, are shedding or have a "flat" appearance. The flank and belly portions of the pelt are usually worked up separately for trimmings.

The pelts taken from the coldest regions are the lightest colored fur. The fur is always richer and thicker on a light-colored pelt than on the dark-hued pelt.

The largest and most valuable lynx pelts are imported from Russia, Finland and Scandinavia. Equally good pelts are obtained from the Canadian or Halifax Bay lynx. These
are rich greyish-brown in color, and the belly is marked with black spots. Furs having the bluish tinge are more rare and expensive than those with the sandy or reddish coloring. The Silvery Alaska pelt is the lightest in color, and the Newfoundland species has the darkest colorings.

The lynx cat fur is taken from the Canadian bob or wild cat. It belongs to the same family as the lynx and often is hard to distinguish from the true lynx. Its fur is similar in markings and color but is not quite so long or fluffy as the lynx.

None of the lynx furs are classified as durable, the fur is injured by friction and sheds, while the leather is very tender. Dyeing makes the pelt less durable than the natural-colored pelt.

There are numerous imitations of lynx on the market. One should purchase this expensive skin from a reputable dealer. The lynx cat is often sold as true lynx.

The so-called lynx of Baachus were more like leopards than the lynx of today. Fabulous powers were attributed to the lynx by the ancients, one of which was extraordinary power of vision, including the ability to see through opaque substances. Hence the name "lynx eyed" as used in common parlance today.

Marmot

The Marmot is found in America, Asia and Europe, where it is commonly known as bear-mouse, or ground hog. It is
famed as the animal that comes from its hole on Candlemas
day to look for its shadow.

There are many species of this animal but commercially,
the pelts come from Southern European countries and Siberia.

The Russian Marmot is about the size of a rabbit. The
pelage is a greyish, brownish fur, the hair is darker at the
root ends than at the tip end and all the pelage is darker
on the head than on the body.

The pelt is not especially attractive, in the natural
coloring, so it is usually dyed. It is often dyed and sold
as Florida mink and Mink Marmot and as an imitation of leop-
ard. If used as Marmot it is usually dyed brown or taupe.

The fur is moderately durable and inexpensive.

Mink

The name "mink" is said to have originated in Sweden,
where the term aenk is applied to European animals. Mink is
known as the everlasting fur, because the fur will be in ex-
cellent condition long after the color has faded away. The
high price offered for mink pelts has led to a noticeable de-
crease in the number of living animals. Fur farming is
being tried in order to meet the demand for skins, but is
not financially successful unless the mink market is paying
top prices.

The mink divides his time between land and water. This
habit tends to produce a better, heavier fur, with darker
coloring. Mink skins should be perfectly and evenly furred
The under fur should be soft, short, close and even, the top hair stiff and longer than the under hair and standing out in a bristling and live manner. The guard or top hairs are more in evidence on the back of the pelt.

The colors vary from light to dark, as is true of the other species. The rarest skins are a rich chocolate brown; the chin is always white. The under fur is dark from the tip ends to roots, and the top hair is of a darker shade. The color fades from mink fur rapidly in sunlight because the pelt is obtained from an amphibious animal.

The fur industry obtains its pelts from many sections. The best furred and colored skins are imported from Nova Scotia. Northern Mink found in northern United States and Southern Canada is finer and better furred than the Southern Mink obtained in other sections of the United States. The latter has a coarser and duller fur.

Russian Mink is a term used to designate inferior grades, which are trapped in China, Japan and Russia. These pelts have a poor quality of flat fur.

Japanese Mink is yellowish and has to be dyed to make it desirable. The Alaska Mink like the Russian is larger in size but has a coarse flat fur, which is shorter than that of any other American species.

During recent years the trap of American Mink has numbered about 500,000 and the European some 20,000 annually.

Mink is imitated in various ways. Poor Kolinsky is
dyed and sold as Siberian Mink. The Marmot is dyed and sold as Russian Mink; it is a fairly durable imitation and is inexpensive. Poor grades of mink are blended or dyed to a good mink color; such furs should be sold as dyed and be comparatively cheaper.

Mink is one of the furs that is used whole or dropped. If dropped, the labor involved will materially increase the cost of the skin.

Mink is also dyed and used as a substitute for the better grades of Siberian Kolinsky.

Mole

The mole skins are imported principally from Holland and Scotland. The Dutch mole is larger but does not have as full, fine and silky a fur as the Scotch mole. Moles found in Canada and the States have a poor grade of fur. When dressed the skins average about 2 by 4 inches. The high cost of mole skin is due in part to the cost of dressing and dyeing such small pelts.

The fur is short, fine and very silky. It has practically no nap, so that the fur flows in any direction. The color is a peculiar shade of slate-blue or brownish-grey, which when viewed from an angle, shimmers into a bronze. The texture is wondrously soft and velvety.

Rabbit is sheared and dyed to imitate mole, and is known as mole-ony.

Mole is also bleached and dyed all the colors of the
rainbow, to be used on evening gowns and wraps.

Moufflon

True Moufflon sheep are grown exclusively on the islands of Corsica and Sardinia. The dehaired skins of the Mongolian and Che-Kiang goats are sold as Russian and Chinese Moufflon respectively.

Muskrat

The muskrat of musquash as named by the Indians derives its name from the musky odor of the animal. The rat is found in almost all countries, but the pelts are not of equal value. Rats are being successfully fur-farmed in this country. Many of the skins on the market are secured from fur-farmed animals. These farms are located in the Gulf, Atlantic and Pacific Coast states, in tide-water or swampy regions.

The rat is raised for its skin and the meat. The pelts are graded; Winter, or best, taken in December, January and February; Late Spring, which has a heavier pelage than is desirable, second in grade; Fall, which is light in color and fur, third. Rat skins are also graded for size, quality and the section from which they are caught. Pelts taken from the far north in Canada are of little fur value, because the leather is too stiff for the better grade of furs. Southern rats from the Gulf states are not as heavy as those from the northern states. Louisiana alone sold 2,858,834 pelts in 1928.
The pelage of the rat consists of soft, dense, greyish under fur and the top hairs, which are long and glossy, ranging from dark brown to black in color. The top hairs are thicker on the back than on the sides; there are none on the belly. The pelt therefore appears black on the back, dark grey on the sides, and light grey on the belly. This accounts for the practice of splitting the pelts lengthwise into the back, sides, and belly. The furrier utilizes each as a distinct fur, sometimes using one part of the pelt as a trimming for another part.

The perfection of fur dyeing has led to a phenomenal increase in the consumption of the rat skin, which is durable, attractive and one of the inexpensive skins.

Muskrat when plucked and dyed is sold as Hudson seal. Blended muskrat is sold as Kolinsky muskrat.

The leather of the fur is not especially strong, but the fur is durable. When purchasing muskrat, select a garment that is large enough so that undue strain on the leather is prevented. The pelt is known as having a "warm fur." Nutria and rabbit or hare are dressed and dyed to substitute for muskrat and sold under legion of trade names.

Nutria

Nutria, which is the Coypu rat, is indigenous to South America, coming from the river regions of the Andes, from Chili, Peru, Brazil and Argentina. It resembles the beaver in that it has an under fur which is protected by the "wa-
ter" hair, about three inches in length. But the fur is neither deep nor heavy like beaver.

Since the animal has its teats on the back, the pelt is slit down the back in order to keep the belly fur intact. The best of the fur is on the belly.

The natural coloring of the nutria varies. Some are speckled yellowish brown or light brown, others nearly white and a few are black on the back.

The fur when freshly dressed and new has the smooth, silky appearance that is so desirable. When worn it is likely to crinkle and curl and become shaggy or rough, or woolly. Only the under fur is used; the pelt has to be unhaired or plucked to remove the water or top hairs.

The raw pelts sell for $2.50 to $8.00 each. When plucked they are valued from $3.50 to $10.00 each, according to the quality and the number of pelts in the lot.

Nutria is rarely used in its natural coloring, which is not especially attractive. Dyed it is used as an imitation of beaver or dyed nutria. Formerly most of the nutria was consumed by the "cutting" trade, that is, for fur felting.

Today the fur is well established on the market owing to the dyers' skill, its durability and low cost. It also has the advantage of having a softer, thinner and more pliable leather than many of its class, which adapts it to a wide range of use.
Opossum

The American opossum is the only species of marsupials found outside of Australia. Until recent years the opossum was hunted for its meat, and not for the fur. Today this condition is reversed and in addition furriers are importing three-fourths of the skins used from Australia. The number of the Australian opossum seems to be increasing in spite of the fact that millions are killed annually.

Opossum skins of the best grade have a deep, fine, soft bluish grey under fur, with longer and darker hair on the back than that on the belly, which is a yellowish, dense, fine short hair.

The skins from Tasmania are larger and yellower, with longer, thicker fur than is found in any other section of Australia.

Skins from the Victoria region, are a darker, richer, blue-grey color than any excepting the Adelaide opossum.

The Adelaide is a tiny creature, the smallest of its species, its fur resembling the chinchilla in quality and color.

The Ringtail opossum is also a small creature, with fine, soft fur of rich blue-grey on its back, with pure white belly. This fur looks something like chinchilla and is occasionally used for fur wear.

Most of the Australian opossum skins have an under hair that is whitish and somewhat kinky, with long black or
brownish top hair.

General color variations are said to be due largely to the age of the animal. The young have very dark markings, which fade out to a whitish color when the animal is old.

Dyers have discovered that opossum skins will take a great variety of colors successfully and that the dyeing process makes the fur softer, more lustrous and silky. This fur is dyed in imitation of skunk, Stone Marten and Black Marten, also Russian Marten. It is pleasing in appearance and very durable for a medium priced fur.

Persian Lamb

This name as applied to lambs is misleading. These skins are collected by Persian traders in Bokhara, and evidently the name is used to designate the quality rather than a locality.

Persian lamb is the finest and best of lamb skins, and is about 18 by 9 inches. The lamb fur is a dingy black or brown at birth. The pelt is always dyed a jet black, to give uniform color. Dyeing will not impart a luster if it is naturally lacking. The fur is composed of short, close, fine, uniform curls. As the lamb grows these curls loosen and eventually disappear. It is a fairly durable fur, and expensive.

Persian lamb paws are the parts of the legs and paws that are not as curly as the body. These are sewn together and used. This fur resembles caracul in appearance.
Pieced Persian lamb is made of the scraps and pieces that are trimmed off when working up Persian lamb. Such fur appears like Persian lamb but is much cheaper.

**Pony**

The Pony or Tartar foal skin is taken from a small horse found in the Volga regions of Russia and on the Siberian steppes. These hardy animals are said to be the descendants of the escaped domestic horses. The natives use the mares' milk for koumyma, which causes a great loss of colts, but in spite of this fact, the herds are estimated to include some 10,000,000 Russian ponies. There are some 300,000 pony skins sold annually for revenue by these nomadic tribes, but this does not seem to threaten the destruction of the herds. These furs were first used in natural colors, but when the dyers found that the skins took black dye beautifully, the skins became very popular. The prices increased four or five times their earlier value. When pony furs became so popular the natives killed the foals immediately after birth. This resulted in an increased supply of skins on the market, which in turn caused a drop in the price of skins so that they are now classed as a medium-priced fur.

The skins have rather a thin leather. The hair is more woolly or furry than that found on the common American horse. The texture varies; on some the hair is soft, silky, glossy, and lies flat like a broadtail, in others it is
coarser and rather shaggy, somewhat like an astrachan.

The young pelts are marked somewhat like the moire astrachans and broadtails. Much of this pattern is lost if the pelt is dyed.

The colors range from white through tans, browns and blue browns. Some of these can be used in natural colors; many are dyed.

This skin is classed as "medium" in durability. It is not an expensive garment to maintain because it can be easily mended.

Rabbit, Hare, Cony

The current fur-market reports are to the effect that rabbit is the most popular and most extensively used cheap fur. It has been called the poor man's fur, yet the labor involved in producing seal, lynx or ermine from rabbit makes it a rich man's fur. Twenty-five years ago few leading furriers handled rabbit as such although it was sold under trade names. Its present place in the industry is due in part to the skill developed by the dressers and dyers in producing attractive furs from these lowly skins.

Fur farming for pelts is not profitable, but if rabbits are raised for fur and meat the venture may prove financially profitable.

Pelts from domestic rabbits have a weak leather, but the pelage is thick and fine and is less likely to shed than the fur from a parchment-skinned rabbit. The hair of this
species wears off and is likely to be brittle and it sheds badly.

Rabbit is known as hare and cony in some countries.

European rabbit or hare is ranked first in quality, New Zealand pelts are second, Tasmanian are third, and Australian are fourth and poorest. England imports some 20,000,000 pelts annually from Australia.

The skins of the tame Belgian and French rabbits and conies are better than those of the wild animals. These are always preferred for use as furs, while pelts from the wild species are used in the "cutting" trade, that is, for felt manufacture. Belgian hares are assorted for size in bundles of twelve each as X, XX, XXX. These are sorted and packed in cases of one hundred dozen to the bundle.

The rabbit fur is soft and flowing. In some instances it is dense and long. The quality depends on the breed, the age of the animal, its environment, and whether wild or tame. The fur can be recognized by the "catty sheen" and the fact that it lacks luster and life. It is found in all colors, but usually is dyed or bleached or both.

Rabbit is the foundation of many of the fur imitations and substitutions now on the market. Folk who can afford inexpensive furs thus have the satisfaction of possessing this commodity, where the neighbors may buy seal or sable. The criticism attached to furriers selling rabbit for better grades of fur is being dissipated by the use of trade
names--i.e., true names when selling the article. There are few furs that do not have imitations made from rabbit today.

Raccoon

"Coon" was used for caps, adorned with the dangling tails, by pioneer settlers of this country. Although the cap had little commercial value it gave a picturesque appearance to its owner and provided comfort as well.

The raccoon is known as the "Waschbar" by the Germans because it has the habit of washing all of its food before devouring it.

The raccoon is not imported from foreign lands and is a distinctly American fur. The raccoon pelt averages about 20 by 12 inches in size. The color and texture vary according to the habitat.

The Northern species has a deep, dense, soft, brownish colored under fur, while the guard hair is long and of a grizzly tan shading to black on the back of the skin. In some pelts the top hair is silvery and dark grey. The choicest pelts have a bluish cast, while others have a yellowish or reddish brown tinge.

The Southern species is smaller, and the fur is coarser, shorter, thinner and flatter, also poorer in color. Southern raccoons are sold as "coat" coons at about one-third the price paid for the Northern or "Furrier's Coon."

If unprime the light-colored under wool becomes reddish; the fur is thin and wooley and the guard hairs crum-
people at the tips, and of course shed easily.

Raccoon is a valuable fur; though not expensive, because it may be used for so many purposes. In years past, the fur was dyed and sold as black bear, marten, or lynx. Today it is so popular that other long-haired furs are used to imitate raccoon. Occasionally if the pelt is very good, the top hairs are plucked; the under fur then resembles beaver and is used as a substitute for beaver.

Today the fur is extremely popular for the "college" coat, and this has greatly increased the market price of the pelt. Raccoon farmers are finding a ready market and top prices for their pelts.

River Otter

The River Otter is called the connecting link between the land and water animals. It is best known as the Common Otter of Europe. The most valuable Otter skins are the American or Canadian; the largest are from Brazil and the smallest are the Feline Otter of South America.

The Otter has been nearly exterminated. In 1785 a load of 300,000 pelts was taken from North American regions and sold in China for $160,000. In 1875 all the American companies had a combined catch of only 3000 annually. This is another argument in favor of fur-farming, game preserves, closed seasons and international treaties.

The Otter is a playful animal, and has the curious habit of sliding down steep mud banks or long steep snow banks.
From the point of view of the furrier, this is hard on the fur.

The Otter pelt when caught has a pelage of dense, short under fur with a thick strong top hair. When the top hair is removed by unhairing or plucking it leaves an exquisitely beautiful, heavy, soft velvety fur. The color when unplucked ranges from a fawn to a liver brown; at this time the back is darker than the under body. The color after plucking is shimmering and lustrous, "at times it seems black with a tinge of purplish silver." The darker the fur the more it is prized.

There is no fur equal to Otter for combined utility, beauty and durability in all kinds of weather. It is a rich, beautiful fur but is not showy or conspicuous.

Unhaired and dyed, the otter is superior to seal fur in appearance and durability. It has a heavier leather than seal. It is an almost perfect substitute for seal.

Many Otter pelts when unhaired are much like the choicest beaver in color and texture, except that the under fur is shorter. This accounts for beaver being sold as otter occasionally.

The pelts are prime and well furred from November 15 to March 15; after that the fur is singed by the sun or damaged by the activity of the otter on the slides, decreasing the value of the skins.

The best colored and furred skins are obtained in east-
ern Maine. These have the darkest colorings known. The best furred but poorer colored skins come from Nova Scotia, in the Fort York section. The poorest grades are taken in the Gulf and Pacific Coast states; these have short fur of very light color. These light or white skins are very common. The Japanese Otter produces a fine, dark-colored fur. The Norwegian and Halifax skins have coarser fur though they are dark colored. Pelts from the southern states have very thick leather and poor fur. The Golden colored Otter found in Norway is very rare and very expensive. All foreign-caught otters are inferior in grade to the North American Otter.

Russian Sable

Russian Sable is a species of the martens, similar to the European and American marten. The Russian Sable has a much silkier, finer-textured fur than the other species. Skins obtained from the depths of the forests, where sunlight does not filter thru, are the darkest, being nearly black. These are almost priceless. Other pelts ordinarily range from light to deep chestnut brown, and are uniform except for the reddish grey parch on the throat and a mixture of black and grey on the cheeks and snout.

Russian Sable of the best grade is so rare and valuable that if a hunter were to catch twenty choice pelts in a season, he would be able to retire with an income for life.

The value of a Russian Sable depends on the density,
length, luster, and color of the top hairs, as is true of all other martens. The leather is fine, close and light weight, yet very durable. These raw pelts have a price range of $75 to $1500 each. There are furs that cost more per pelt, but figured in cost per square inch Russian Sable is the most valuable of furs.

The most valuable of these pelts come from Yakutsk, Siberia; these have silvery hairs that are evenly distributed thru the fur. These are the wide-stretched skins.

The Amur skins have a paler but pretty bluish tone with many silvery hairs. The fur is not so deep nor close, but is effective.

Chinese and Mongolian skins are similar to the Russian Sable skins, but are inferior in color, strength and quality.

Jakutsk skins are smaller and have a browner top hair, and have large, full, silky tails.

Okhotsk produces smaller sable skins that are browner and have finer, fuller fur than the Jakutsk skins.

The pelts from Kamcharka are stretched lengthwise. These are silvery tipped and full furred, though lighter in color.

Light-colored pelts are tipped or blended. This does not detract from the beauty; rather it makes them appear like the darker skins. Only experts can detect this tipping. These tipped pelts should be much less costly than
the natural dark-colored sable.

American brown sable and Kolinsky are used as imitations of Russian sable.

Sea Otter

The Sea Otter is extinct so far as the average furrier is concerned, for there are practically no pelts on the market. A single skin now sells for from $1,500 to $2,000. There were only eighty-one skins taken in 1913.

H. W. Elliot says that "when Russian traders first opened the Aleutian Islands, the natives wore cloaks of fur of the sea otter. When the Pribilof Islands were discovered, the Russians caught upwards of 5,000 otter skins the first season. In less than six years the otter disappeared from these northern waters and is rarely if ever found there today."

Methods of fur farming are not successful thus far, and very few instances are recorded where the otter has reproduced in captivity. The otter skin is large and loose for the otter body. When stretched and dried it is therefore drawn out to one-third more than the apparent size of the animal.

The otter is unlike other aquatic animals in that the pelt does not require unhairing; the pelage has rich, dense, silky under fur, and the top hairs are soft and short.

The color varies from a pale grey-brown to a rich black. Some pelts have a sprinkling of silvery white hairs.
In this event the blacker the pelage, and the more regular the silver points, the more valuable the fur. The fur, which varies from an inch to one and one-half inches in depth, is lustrous, pearly white at the root ends, and gradually darkens toward the tip ends.

When judging sea otter note the depth of color or intensity of color, the smoothness and eveness of the pelage, thickness, density and length of the fur, the presence or absence of a woolly patch on the back, number and distribution of silver hairs, and any indications of singed or slightly curled fur.

Sea Otter is rated at one hundred per cent on the fur chart scales. All other furs are judged with otter as having the best fur, in texture, color and leather and in appearance and durability.

Seals

Seals are divided into two groups, the True or Earless seal which is the Hair Seal, and the Eared or Fur Seal. The skins of the earless seals are largely used by tanners. Some 7 species are found in this family. The Fur Seal family is composed of 8 species whose skins are used for fur.

The pelage of the Fur Seal is composed of deep, soft, velvety under fur, and longer, stiff, coarse guard hairs. The hair seal fur consists of the hair and no under fur.

Pelagic sealing was carried on without mercy during the nineteenth century, with the result that the fur-seal herds
were practically exterminated. Government intervention has saved the few seals left, and government protection has built up the herds.

Seals formerly were found in many waters, north and south. Today the largest seal herd has its breeding grounds on the Pribilof Islands, Alaska, St. George Island in this group was discovered by the Russians in 1786, while St. Paul Island, forty miles north, was discovered the following July.

The United States purchased Alaska in 1867. During the first few years after this the government allowed different companies killing privileges. In 1870 the killing privileges were granted exclusively to the Alaska Commercial Company for a period of twenty years. When this lease expired and bids were called in for releasing the killing privileges, the North American Commercial Company was the highest bidder. This lease expired in 1910, at which time the government changed its policy. Instead of releasing to a private organization the government took over complete control of the sealing operations, and this policy is still in force.

During the period 1870–1910, so-called pelagic sealing developed into tremendous proportions. The great evil incident to this period was recognized. Government agents were stationed on the islands, and the company carried on its killing under supervision. Young males from 2 to 3 years
old were taken. True pelagic sealing meant killing of the seals in the open sea. This form of killing was wrong and wasteful. Probably half the animals shot were never recovered. During the breeding season the cows are found at sea, going to and from their feeding grounds. Probably 90 percent of the seals killed belonged to these herds of cows. When the cow was killed, the pup that she was nursing died of starvation on land. Before 1910 the beaches were literally covered with dead pups. Sealers tried to prove that these pups died of disease, but scientific investigation proved that the pups died of starvation. During these years the United States government was striving for the abolition of this form of pelagic sealing. Since this killing took place outside of the three-mile limit, established by International law, there was no way of compelling other governments to stop their subjects from pelagic sealing on the high seas.

Representatives from England, Japan, Russia and the United States accordingly met in conference, on the request of this government. Convinced that the seal herds would be annihilated within a few years, under the existing conditions, they worked out a plan which prevented any of their subjects from engaging in pelagic sealing in the North Pacific and Behring Sea for fifteen years. The treaty to this effect was signed in 1911. This treaty also protects the Japanese and Russian herds.
Since then the government has taken over complete control of the sealing operations. The herd was depleted to 135,000 seals. The first step in the rehabilitation of the herds was to have a closed season for six years, only enough seals being killed to supply fresh meat for the natives on the islands. This proved to be too great a protection for the herd. The average number of cows per bull dropped to less than thirty. This resulted in a great deal of fighting, as is true with any polygamous species. In 1918 killing on a commercial scale was resumed, and several thousand of these excess males were killed. Since then the rookeries have had comparative peace and quiet.

The results of regulated land killing have established the value of this system, for the herd has increased to more than 800,000 in the ten years from 1912 to 1922. In 1910 the Northern American Commercial Company had difficulty in getting 15,000 animals. During the period from 1917 to 1922 more than 145,000 surplus males were taken. The take of seals in 1923 was 31,800.

The government has worked out policies, based on the natural habits of the animals, which are essential to the development of the herds. It should be remembered that the pups are born about 50 per cent for each sex. Since one bull has some 40 cows in his harem, a surplus of 39 males is left for killing. The law requires that an annual reserve of 9,350 three-year-old males be kept to provide for the
growth of the herd. Theoretically the remaining bachelors are available for killing.

The Bureau of Fisheries made the official announcement in 1926 that 19,087 fur-seal skins were taken during the season of 1925; of this 17,609 were three-year-old males. The remainder were chiefly the two and four-year-old males. Of these 7,133 were stripped and blubbered before salting. The others were skinned with a knife and salted with the blubber on.

Dr. Carl B. Boyd, superintendent and physician at the Neah Bay Indian Agency, reported in 1926 that he had authenticated on behalf of the Department of Commerce a total of 1751 seal skins taken by Indians under jurisdiction off the coast of Washington during the spring migration of the Pribilof Islands fur-seal herd. In 1924 the natives in southeastern Alaska took only 8 skins, whereas in 1925 they took 279 skins.

Under the existing protective measures, it is believed that the seal herd will number a million in the course of a few years.

Seal skin is one of the most difficult skins to dress and tan. It takes a longer time than any other fur. The skins are removed from the animal with a layer of fat or blubber left on. Then salt is placed over the flesh side of the stretched skin. When cured the skin is taken from the salt, and resprinkled with fresh salt; each skin is then
rolled, tied into a compact bundle, fur side out to prevent the skin from drying and hardening. The bundles are packed in oak casks for shipment.

The Bureau of Fisheries has these skins sent to Fouke's St. Louis. This company has the contract for dressing and dyeing the seal skins for the government. It should be remembered that the government owns these skins until Fouke's have completed their work. The skins are sold at public auction in St. Louis.

Fouke quoted the following prices April 18, 1929: Regulars, which contain choice skins, scarred and faulty which are as their name indicates.

**Logwood Brown**

Regulars average price $48.28 per skin.  
Scarred and faulty  37.10 "  "

**Black**

Regulars average price $33.92 per skin.  
Scarred and faulty  17.00 "  "

"The introduction of the logwood brown has proved so successful that brown dyed skins bring 50 per cent more at auction than the black."

Formerly seal skins were sent to London to be dressed. This was an expensive procedure since the raw skins were shipped back after being dressed and dyed. They came back as a foreign product, on which an ad valorem duty of 50 per cent had to be paid. The logical solution was to establish
an organization in this country that could equal the work of the London dressers.

In 1915 several of the best seal experts were brought over from London. These men have trained Americans, and the output of the Fouke Fur Company is now equal in every respect to that of the London companies. This dressing and dyeing requires more than 125 distinct processes.

To judge the quality of seal skin one must note:

1. The maximum softness and flexibility and the "stretch" of the leather.

2. The weight of the skin. The lighter skins are more desirable.

3. The texture of the fur—deep, soft, velvety and rich, with a "sleek shimmering" finish.

4. Absence of guard hairs.

5. Size of pelt. Is it government stamped?

6. General appearance. Is the garment equally well furred? The length of the fur is 3/4 inch long on the shoulders and 1/4 inch on the breast of the pelt.

7. Color. Depth and color of the seal—brown at the root ends of the hair; rich, warm black on the tip ends. Logwood Brown Alaska Seal is the newest color to be successfully applied to Seal skins. This produces a beautiful and enduring fur, at as reasonable a price as the black seal.

Seal is the warmest of furs. Wetting cannot hurt it for it has durable fast color and is strong and tough. Al-
though the initial cost may seem high, it is a cheap fur in
that it is durable.

Victoria seal is the pelt of the female of the Alaska
species. It is smaller, less durable, and contraband. The
United States government rules are very strict about the
possession of Victoria seal. Customs officers advise women
going abroad to register their seal coats at the United
States Custom House before sailing and receive a certificate
for readmission. Otherwise it is sometimes difficult to get
American-made and American-purchased garments back into this
country, because of the chance that contraband Victoria Seal
may thus be admitted by the inspectors.

Other fur seals include the Alaska, Cape Horn, Cooper
Island, Lobas Island, Northwest Coast, Robben Island and
Shetland or the South Sea. The last named has been practi-
cally exterminated. Northwest coast or Victoria is not
available now because the government does not permit kill-
ing the females. The Alaska Seal is the best seal skin now
on the market.

Imitations and substitutions for fur seal are very com-
mon. Hudson seal, which is seal-dyed muskrat, is the best.
Rabbit, Nutria, Cony, and Hare are used for the less expen-
sive imitations. Fabric fur cloth is also used quite exten-
sively, but there rarely is a cloth imitation that does not
betray itself at first glance.

The Grey Seal, which is a true seal, is found along the
north Atlantic coast. It is quite different in habits and appearance from the other species. The coat of the grey seal is yellowish in color, becoming lighter underneath, and is marked with indefinite spots. Formerly this seal was exclusively used by tanners. Today the grey seal is being used for fur to a limited extent.

Common Seal, also a true seal, occurs in North Atlantic and North Pacific oceans. The skins are used for leathers and are manufactured into trunk and bag covers, purses, etc., or used with the hair left on for saddle housings. The skin is also used by the northern natives for rain coats, caps, moccassins or bags because the hair sheds water; they are also used in making kyaks.

Harp or Greenland Seal is a true or hair seal. The general color of the adult Greenland Seal is a yellowish white with black markings on the back and limbs. The markings are more distinct on the males. For the first few months of its life this seal is classed as "White Coats" are dyed black or brown and sold as "Wool Seals." Most of this Wool Seal is marketed in London.

The capture of the Harp seal makes a romantic story which Agnes Laut tells so well. The sealers go north in the spring, in time to kill the cubs when the cubs are about a month old. The cubs weigh from 40 to 50 pounds and are heavy with the seal oil. The skins are taken to port with the blubber on. At port the blubber is removed, and the seal
oil is refined. The pelts are sold as "Wool Seals." Seals which are killed for the tanners are secured on a later trip.

The natives of the north use seal oil for food, lamp oil and lubricating oils. The other parts of the body provide material for making boats or kyaks, sledges, clothing and hunting implements.

Skunk

Skunk has been designated as "Enfans du diable" by Gabriel Sagard Theodat in his History of Canada written about 1639. The name skunk is said to have been derived from the Cree name "Seecawk." The animal is known for his defense—that of excreting a nauseating odoriferous oil. It is greatly to the credit of trappers that they obtain pelts free from such odor. There is of course, slight characteristic odor to this pelt as there is for all other species, and when wet the pelt odor may become noticeable.

The average pelt is 8 by 15 inches in size. It has two white stripes running from the head to the base of the tail. The dark-brown under fur is thick, close and full; the brownish black top hair, which is long, flowing and glossy, is 2 1/2 to 3 inches long. This fur is generally conceded to be one of the most durable, handsome and popular furs on the market.

If the pelt is caught too early, the under fur is thin and is "blue pelted." If taken too late, it is "singed"
from the sunlight.

At present the pelt is sold so cheaply that fur farmers cannot produce and market the skunk at a profit. Practically all the skunk on the fur market is therefore obtained from trappers and hunters.

The finest furred pelts are secured from New York, Pennsylvania, Ohio, Michigan, New England and Canada. The largest and finest skins are produced in Wisconsin, Dakota and northern Iowa. These are the most valuable on the market. The skins obtained in the South are not so full furred. The South American skunk is coarser and less desirable.

Formerly the white stripes were cut out from the pelt and the fur then sold in its natural coloring. This practice prevails to some extent today. Much of the skunk is now dyed, however, either a dark brown or a jet black, concealing the white stripes. The jet-black dyed skin has a beautiful luster and is not so expensive as the natural. It is easy to distinguish between the natural and dyed furs, if they are compared. Dyed skunk is known on the market as black marten, dipped marten, and Alaska sable. Paris led the fashion for calling the fur by its own name in 1912. Since then it usually is known by its own name.

The natural or undyed fur proves to be a good host for moths, so requires more careful storage than the dyed.

Skunk is now commonly imitated by using dyed opossum or dyed raccoon. In the former the top hair is longer, coarser
and stiffer; the under wool is frizzy and less compact than that of the skunk. The raccoon has thinner top hair, with a heavier under wool that is likely to mat, a characteristic not true of the skunk.

Shiraz

The Shiraz lamb comes from Persia. Its fur has a loose curl, the dyed skins lack the luster of the skins from Bokhara. Normally there are 300,000 skins exported annually.

Squirrel

There is a wide range of variation in the squirrel family, found in all parts of the world. Squirrels seem to be more abundant in Asia than elsewhere. An interesting fact is that the red squirrel of England becomes the grey squirrel of western Europe, and it grows darker and darker the farther toward the east one goes until one finds an almost black squirrel in Japan.

Commercially speaking, furriers use the Siberian and Russian squirrels, and a few that are obtained from Japan and China. Previous to the recent war, the skins were imported dressed from Russia and Germany. Today they are imported raw. At one time squirrel tails were sold raw by weight, a thousand tails weighing from six to nine pounds.

The best squirrel skin has an even, thick, close fur on the back, while the belly or "locks" are flat furred. The color on the back is a dark blue-grey and the locks are white or cream colored. The medium and light grey skins are
also desirable for use undyed. Many pelts are streaked or
singed with yellow, red or brown. These are dyed or tipped.
The pelts are tough and durable although light in weight.
The tails, which are usually small and dark colored, are
often used.

This pelt is one of few that is rarely used whole. The
backs are cut away from the white locks and used separately.
This is due to the color and the texture of the fur.

More than 5,000,000 squirrels are said to be on the
market annually. This does not seem like such a large num-
ber, considering that England imported 2,730,000 skins in
1839 for local use. Squirrel is imitated by the use of mar-
mot, woodchuck, bear mouse and groundhog.

Stone Marten

The Stone Marten of commerce is often known as the
white breasted beach, which is more common than the Pine
Marten. The Germans call it "Stein-marder" because it is
usually found among rocks and stones.

Its size of 16 by 5 inches is practically the same as
that of the Pine or Baum Marten.

The exquisite fluffy, deep under fur is a stony white
and the top hair is ash colored at the root, shading into
chestnut in the middle, then to black on the tips, which
gives the back of the pelt the greyish brown effect that
characterizes it. The belly is whitish. There is no
yellowish cast to the fur, though there is a darker, brown-
to-black marking down the center back. The tails are especially choice in their rich, dark coloring.

Natural Stone Marten is not especially popular at present. The choicest skins used in their natural colorings are imported from Bosnia and France. Pelts from Asia are less woolly and more silky than some. Turkey, Afghanistan and India produce poorer grades of Stone Marten. The Russian Stone Marten is light colored and has coarser texture.

The lighter-colored skins are usually Stone Marten blended to the dark Russian sable colorings. This fur is quite durable. The leather is firm and soft.

Recent figures indicate that some 50,000 pelts are imported from Bosnia and France, 100,000 from Germany and 500,000 from Russia annually.

Susziki

The Susziki, which is commonly confused with the gopher, is about the size of the European squirrel. It is exported for the fur trade from central and eastern Europe and Siberia; it is also found in some sections of North America.

The fur is rather short. The under part of the pelt is a yellowish brown. The sides, which are yellow, are separated from the belly coloring by a dark black band. The back of the pelt has six to eight longitudinal stripes alternating with five to seven rows of light spotted stripes. This marking gives rise to the name the "Thirteen lined" or Leopard Susziki.
In times past the Susliki was never used as a good fur but as linings or for places where cheap fur was necessary. Today it is used as a better fur, principally for trimmings. It gives moderately good service.

**Thibet Lamb**

Thibet lamb is usually sold as white Thibet lamb, and is also known as Mandarin lamb. It has long, curly, fine, soft wool which takes the dye well, or can be bleached a beautiful white.

It is said that the lamb is wrapped and sewed into a jacket immediately after birth and that this preserves the quality and cleanliness of the wool during its six weeks of life. This fur is used for baby sets, baby robes, and for evening garments.

**Wolf**

The wolf is referred to by J. E. Harting in his volume, *Extinct British Animals*, by saying: "It is well known, great efforts were made by King Edgar to reduce the number of wolves in the country. But not withstanding the annual tribute of 300 skins paid to him during several years by the King of Wales, he was not altogether successful." During the reign of Henry III, the king gave grants of land to those who would destroy the wolves on this land. This continued and persistent effort to kill off the wolves is having the desired result, so that the animal is becoming extinct as the country is settled.
Furriers use the pelts from wolves caught in the Hudson's Bay region, the States, Siberia and Russia, and some from Asia. The prairie dog—i.e. dog wolf—is also used for cheap wolf.

The wolf is closely allied to the dog; it has a deep, dense under wool and a long, fine flowing guard hair. The hair on the head and shoulders is coarser and longer than that on the rest of the body. The color of the fur ranges from a whitish grey to brown or black.

The grey wolf or timber wolf has longer, finer, denser hair than any of the European or Asiatic prototypes. The Alaska wolf also has long, dense hair, but coarser than that of the timber wolf. The Russian wolf has a thick, brownish-red under fur, bluish at the root ends, with long flowing black top hairs. The Siberian wolf is larger, lighter colored, and has harsher fur. Wolves from the Fort Churchill district in Canada are almost white, while those from the Esquimo Bay section are bluish-grey. The Chinese, Japanese and Indian wolves have very poor pelts of little commercial value.

The better grades of the fur have the very long, flowing top hair. Although wolf is rated as one of the best wearing furs, these flowing top hairs are injured by friction. In poorer grades of wolf pelts, the fur lies flat. If the pelt is taken from a poisoned animal, all the hair and under fur is likely to fall out.
Wolf takes dye very successfully, but the beauty of the fur is not increased in this process, and the fur loses about one-third of its strength in the process of dyeing. Wolf dyed black may be used as a substitute for lynx and fox. The present prices of wolf, however, $12.00 to $15.00 for Siberian, and $7.00 to $15.00 for American, make this fur too expensive to be used as a "cheap substitute" for lynx and fox.

The prairie dog or coyote is dyed to be used in lieu of fox and better grades of wolf. It is also used as a substitute for cross fox. The fur is durable and inexpensive.

Wolverine

The pelt of the wolverine is uncommon, less than 4,000 are said to be on the market annually. The rareness of the pelt, its durability and beauty cause one to wonder why they are not very popular.

The pelt is about 16 by 18 inches in size. It has full, thick, woolly under hair, with strong, bright top hairs from 2 1/2 to 3 inches long. The color varies, there may be two or three shades of brown on one pelt. The center back is very dark at the shoulders, this color runs down the flanks to the root of the tail, forming a perfect disc or saddle marking. This is bordered with a paler shade of brown, merging to a dark brown toward the flanks.

Gottlieb says "The wolverine is the most durable of all the long haired furs." The leather is thick and wears well,
and the fur wears well. The color does not fade out in sunlight as many other furs' colors do. The pelt is expensive because of its peculiar coloring and markings and its durability. Wolverine fur is also used to manufacture tails, which are used to imitate the stone marten tails.

Probably the trappers tell more stories of the wolverine, than of any other animal. It is known as the glutton, because it steals and hides everything, from trap bait, guns, axes and clothing to food. If a wolverine finds a string of traps and tampers with it, the hunter either will have to get the wolverine or give up trapping in that region.

The Wombat, Kaola or Australian Bear

The pelt of the Wombat is exported from Australia, where the animal thrives in large numbers. The pelt is approximately 20 by 12 inches in size. It has a thick spongy fur, of under hair about one-half inch deep, without top hair.

The color is whitish grey, which is so characteristic of most of the Australian mammal pelts. The animal is often called the Australian badger because of this coloring.

The fur is cheap, but good for rough wear, and is commonly used. The fur takes a variety of colors, so is commonly dyed. It is also used as a substitute for better grades of fur.

Unless the Australian governments control the open sea-
son for the hunting of the Kaola, the species will soon become extinct, because the demand for cheap fur exceeds the supply.
Table of relative durability, using Otter as 100 per cent for standard.

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