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can be rolled up in the summer time, thus making them nice and cool. The seats and floors are covered with canvas and carpet and are very comfortable and cosy. For heating purposes we use ordinary foot-warmers, four to a van, and plenty of robes. These keep the children snug and warm on the coldest and stormiest days in the winter time. The vans fit on an ordinary farm sleigh in the winter time, and on a good, stout democrat in the summer."

All wagons, however, should be comfortably cushioned, and in winter should be heated. In most cases the driver, in his contract, undertakes to see that the footwarmers are in good working condition.

Public and Private Transportation.

In most cases transportation is free and is provided out of public funds by the trustees. However, both the public and the private methods are in force in some cases, and should be explained.

In the case of public transportation the cost varies according to the length of the route and the method of payment. When the trustees provide the vans and sleighs the driver usually gets, in Canada, \$2 or \$3 each day that the school is in session, or else a lump sum for the year of about \$500 or \$600. Of course, when the driver provides the van the cost is higher; but this is not a fair system, because if the vans are suitable for the school purposes they are not profitable for other uses. The system of public vehicles with payment by contract for driving which includes the driver's wages and use of teams, horses, robes and warmers is the most widely spread method.

The private method, however, is also common, and takes the shape of family transportation which is practiced in various forms. In this case the parents are responsible for the transportation of their children, and are either paid by the district or do it at their own expense. Four such methods are in existence in North Dakota.

1. All pupils in the district receive a fixed amount for each day's attendance, ranging from ten cents a day in some districts to twenty-five cents in others.

2. The allowance for transportation is graduated according to distance from school, and varies from five cents to twenty-five cents per pupil for each day's attendance. These two methods are in use in Rolette County, and are so satisfactory that Superintendent Sherry states that they give less trouble than any of the other systems. In fact he believes that this is THE system. The advantages over public vans are:

(a) No child must ride very far to get to school.
(b) No child need start from home till a long time after the rig would have gone, had it been in use.

(c) The expense is less and
(d) the pay is distributed throughout the district. It might be mentioned that in this county, two of the consolidated school buildings have living-rooms upstairs for the teachers to use, if they desire.

3. In some districts parents that live very far from the school are paid a fixed sum for the family, e.g., one family is paid \$5 a month and another \$2, while all others are required to bring their children free of charge.

4. Parents must bring their children free of charge to public funds. Superintendent West believes in this system. "We do not pay people for having their children educated. If their farms are far from school it is unfortunate, the same as if they are far from the elevator. Besides, there are no farmers who do not have an idle horse that can be put to this use with very little expense to them, but a system of pay increases taxes greatly. These are the arguments we use and they have worked, but they would not work everywhere."

There are advantages and objections in all these methods, and it does not matter whether the payment is a flat rate for attendance or a variable rate according to mileage, or a fixed sum per family, or even if there is no payment at all. The best method depends on the locality and must be worked out from experience. The main point is that transportation must be provided in some way. This is an age of transportation, so why not let children share our modern methods of travel? The distance between schools used to be the distance children could be made to walk. Now it only depends on the distance a child can be transported in comfort.

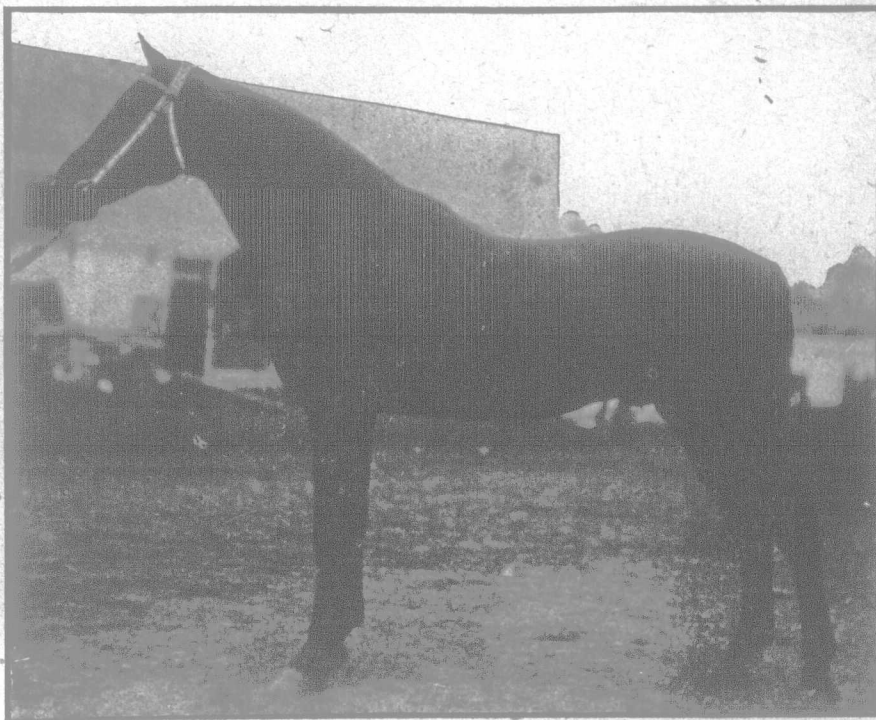
The Driver.

Satisfaction can only be obtained when competent drivers are employed. Fortunately there has been no lack anywhere of trustworthy, temperate and careful men whose word is respected and obeyed. They should have full authority over the conduct of the children and power to force badly behaved boys to get out and walk. Strict discipline must be maintained throughout the journey. Indeed, it has been found that the pupils behave better and are under better control when riding in a van than in the old method of walking alone to school. In most cases the driver is under contract to refrain from the use of tobacco and improper language, and to report improper conduct to the teacher. Experience, however, proves that the conduct is always good and that punishment rarely has to be resorted to. The driver, who is usually a farmer living at the end of the route, furnishes a bond for faithful performance of his duty; he rides inside and keeps good order. In the busy season his wife acts as substitute, and this is found satisfactory in numerous cases. Older schoolboys or hired men are never satisfactory and cannot be recommended. In most cases, especially when the conveyances belong to the school, children feel the right of the school to dictate their conduct on the

journey and recognize the authority of the drivers. In the West there has been no difficulty in securing reliable drivers at \$2.50 to \$3.50 a day; fears regarding colds, contagious diseases, poor ventilation and bad moral tone need never exist. Fighting, quarrelling, bad language and other evils are banished, and parents know their children are safe. Sometimes the driver pays a bond for faithful performance amounting, in some cases, to a month's payment, or, in other cases, a fixed sum of one hundred dollars.

Consolidation, Good Roads.

The transportation, of course, is easier when the roads are good. It should be remembered, however, that if the roads are good enough for children to walk over they are passable also for wagons, and that in wet weather children in wagons will reach school with dry clothes and feet, while children who walk over wet and muddy roads would have to sit with wet feet all day, and, besides, will be tired before beginning school work. Roads of all kinds are traversed in Virginia—level, mountain, rocky, sand; macadam and red clay roads; yet two hundred wagons run successfully over them without breaking down during winter or summer. But, of course, good roads are a great asset and consolidation has fairly started a zeal for road building, for nothing stimulates the good-road craze like road travel. The rural mail courier likewise needs good roads, and so improvement of highways becomes a matter of daily conversation. If a school van gets stuck in the mud, the consciences of the farmers are smitten. With good roads the van runs "on time." Children rely on it passing their home at 8.15 a.m. and reaching school at 8.50 a.m. In fact good roads make punctuality possible. Good roads and consolidation move together though the condition of roads is only an incidental part of school transportation. Kentucky has excellent macadam roads and few consolidated schools, whereas Ohio, with many poor roads in some parts, has an excellent system of consolidated schools. Besides, if the roads are too bad for horses to travel on they certainly are too bad for children.



Eastwood Todd.

Champion Standard-bred stallion at London. Owned by T. D. Elliot & Son, Bolton.

In Manitoba the Public Schools' Act gives power to trustees of any consolidated school district to spend money to acquire, improve or make passable any road or roads requiring such action to properly transport children to school, and the Department of Education is authorized to make grants towards such expense if the municipality has refused or neglected to do the work.

Success and Popularity of Transportation.

The success of transportation is best seen in the regularity of attendance which is often better than in cities where good streets and sidewalks and short distances prevail. In Garfield School, Whitman County, Washington, the pupils who were transported five miles to school made 96.7 per cent. of attendance, while in the city school the percentage was 95. Both are remarkable records, but surely the transportation achievement is an extraordinary one. In Indiana the movement is so successful that already 1,963 school districts have been abandoned and centered in 665 consolidated schools, a gain of 239 consolidated schools in the last five years. In 1914 the State of Iowa gave a report of 64 transportation routes, mostly in the northwestern part of the state. This report from 64 drivers for 180 trips each represents a possible of 11,520 trips from 3 to 12 miles each which should have been made. Out of these 11,520 trips only four and one-half trips were missed during the year. Manitoba has a similar record. At some schools not a single trip was missed for several years. Punctuality is reduced to a fine art; regularity is no longer an astonishing thing. Children like the journeys and are anxious to go to school. Parents, who them-

selves had to walk to school, now see their children drive to school and are thankful for the convenience. Transportation is a success and is in the best interests of the children, which after all is the main thing to be considered.

Wherever a consolidated school is in operation in Manitoba there is no record of any desire to return to old conditions. Taxpayers and parents would refuse to go back. Those living in the shadow of the consolidated school are glad to see the larger number of children, and the greater competition and enthusiasm engendered. The teachers, too, have greater pleasure and encouragement in their work.

Proper appreciation of the advantages of transportation would soon render the old district schools a discarded and discredited system.

Nature's Diary

A. F. KLUGH, M. A.

One of the most characteristic sounds of autumn is the call of the Blue Jay. At no time of year is this species a particularly silent bird except when in the vicinity of its nest, but in the fall its vocal efforts are more noticeable than at any other time. Its usual note is a rather harsh scream, certainly not a musical note in itself, and pleasing only because of its association with golden autumn days of bygone years. It has, however, another note, a musical and well-modulated whistle, which I fancy is attributed by many to some entirely different species of bird. In addition to these two notes of its own it has a fairly extensive vocabulary which it has borrowed from other birds, as it is a mimic of no mean ability. Its rendition of the cry of the Red-shouldered Hawk, for instance, is so perfect as to often deceive the trained ornithologist.

The Blue Jay has an extensive range; from the Atlantic to the Prairies and from near the Hudson Bay to Texas. Throughout the greater part of this vast range the species is resident, being found both in summer and winter. In the extreme north it is a summer resident only, and I am inclined to think that in all

other localities in which the species is resident that the individuals are not, but that in any given territory the individuals which are present in summer migrate farther south in the fall, their place being taken by individuals from farther north. At any rate, in both spring and fall we frequently see bands of Blue Jays apparently migrating.

The nest of this species is built in trees and bushes, and is constructed of sticks, and lined with herbs, grasses and other soft material. The eggs, which are from four to five in number, are variable in color, usually being clay color with brown spots.

The economic status of the Blue Jay is a question which requires very careful discussion, as the wide range of its menu includes items which render it both beneficial and harmful. The main charges brought against it are that it destroys the eggs and young of other birds and that it eats corn, and it has been contended that the harm which it does in this way outweighs the

good it does by the consumption of injurious insects. In order to settle this question the U. S. Biological Survey carefully investigated the food-habits of this species, examining the contents of 292 stomachs, which were collected at all seasons of the year in 22 States, and Canada. This investigation showed that the food of the Blue Jay consists of 24.3 per cent. of animal matter and 75.7 per cent. of vegetable matter. The animal food is chiefly made up of insects, with a few spiders, myriapods, snails and small vertebrates such as fish, salamanders, tree-frogs, mice and birds. Because of the statements which have been made to the effect that eggs and young birds are an important item of the food of this species, everything was carefully examined which might by any possibility indicate that birds or eggs had been eaten, but remains of birds were found in only 2, and the shells of small birds' eggs in 3, of the 292 stomachs. It is of course possible for a bird to eat an egg without swallowing any portion of the shell, in which case the soft contents would soon disappear from the stomach, but in view of the fact that such substances as dead leaves, bits of plant stems, and rotten wood which are evidently swallowed accidentally with insects or other food, are constantly found in bird's stomachs, it does not seem probable that Blue Jays would discriminate against eggshells. To test this matter, four eggs of the House Sparrow were offered to a Jay in captivity. The bird at once seized the eggs and began to eat them, but when any piece of the shell, no matter how small, was dropped, it was at once picked up and swallowed, so that the shells with their membranes were entirely gone before the soft contents.

Insects are eaten in every month of the year, but