

英國之部

外務省

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英國之部

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第拾六號	一同書記官ヨリ同断手記尚一冊送致ノ来翰
第拾七號	一同公使へアタムス著述ノ手記寄贈謝辞ノ回答往 翰
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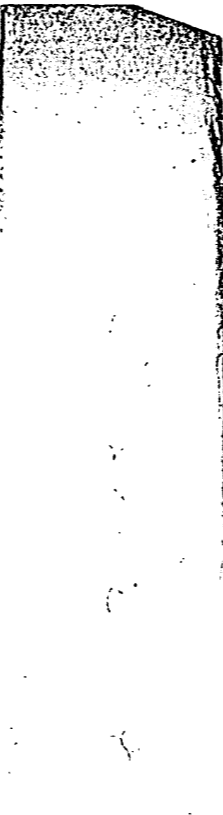
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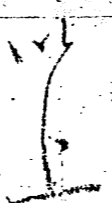
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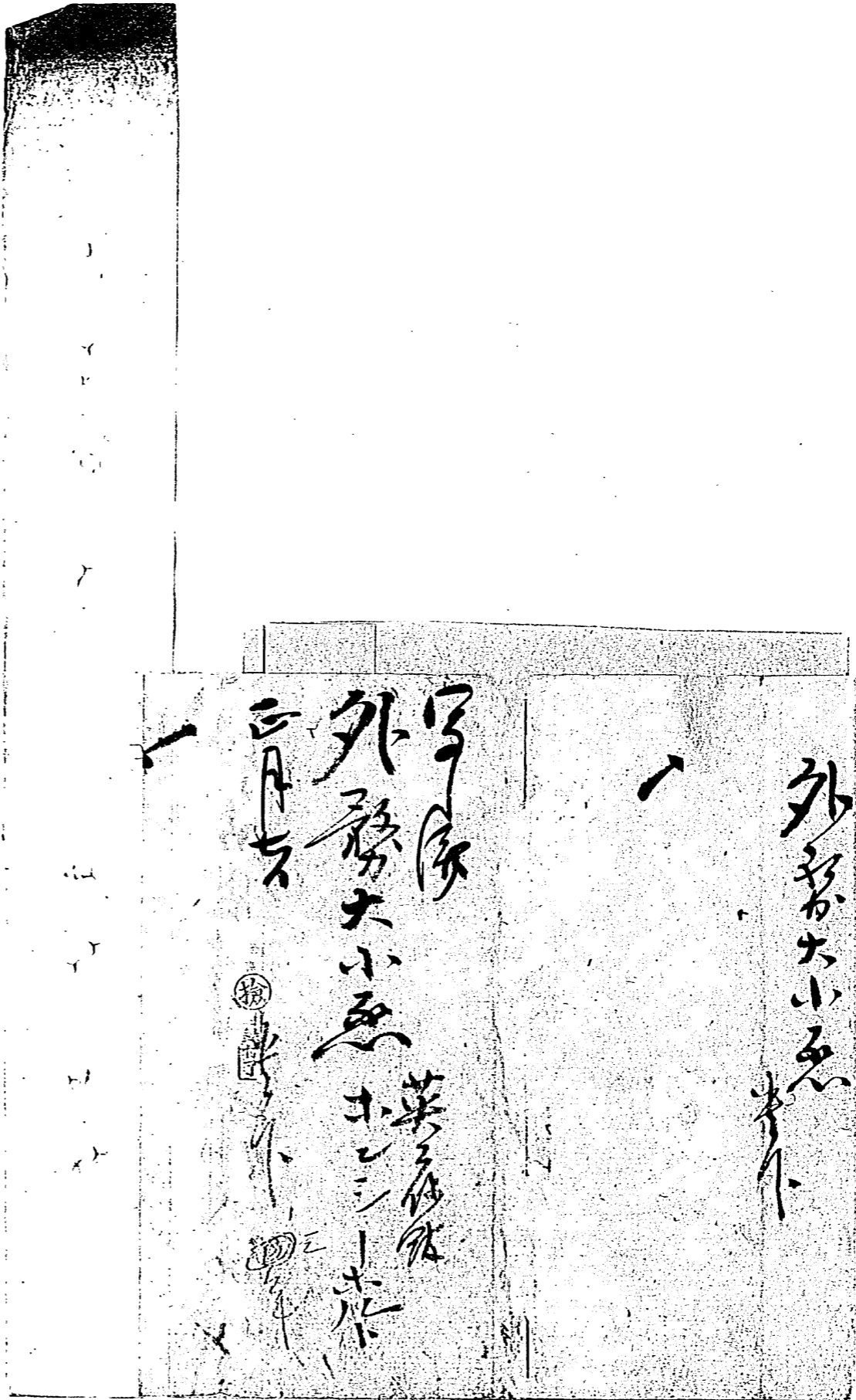
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MAP OF SILK DISTRICT

To accompany Mr Adams's Report

- indicates a Daimio's residence
- marks the boundary of a Province
- red line shows Mr Adams's route
- part of the Nakasendo, one of the high roads from Yedo to Kioto
- Tōge means a Pass, as in Wada Tōge



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AMERICAN EXPORT COMPANY

soon be forthcoming. At the same time a certain number of European reelers should be engaged to teach the Japanese how to use the machines. The natives would soon learn their lesson, and thenceforward would be able to do without any teachers. The Silk would then become clean and uniform, and would rise in value, soon making up by its increased price for the first outlay in machinery.

This is a matter which the great proprietors should take into their immediate and serious consideration.

I annex hereto a table, showing the amount of cases of Silkworm's eggs shipped in 1869 to France and Italy by the three great Steamboat lines, and also the gross weight of the case in pounds avoirdupois. It will be seen that the total export of cards in 1869 is estimated at 1,390,000 against 2,300,000 in 1868. The unusual ravages of the Uji have, as was expected, much to do with the considerable decrease.

I am also informed that the total shipments of silk from the 1st of July 1869 to the end of the year are about 6850 bales against 12,000 in 1868, and 5 000 in 1867 for the same period. There is however no dearth of silk in the market. Indeed from all appearance the crop of 1869 seems to be quite as abundant as that of 1868, but much less business was done in Yokohama during the last six months than during the corresponding six months of 1868.

(Signed) F. O. ADAMS.

EXPORT OF SILKWORM'S EGGS IN 1869.

	To France.	To Italy.	Total.	Gross weight.
	a. d. p.	a. d. p.	a. d. p.	a. d. p.
Per Mess. Imp.	1,865 cases	1,633 cases	3,598 cases	159,641 lbs.
Per P. & O. Co.	1,733 "	950 "	2,683 "	126,678 "
Per P.M.S.S. Co.	78 "	— "	78 "	3,510 "
	<u>3,776</u>	<u>2,583</u>	<u>6,359</u>	<u>319,829</u>

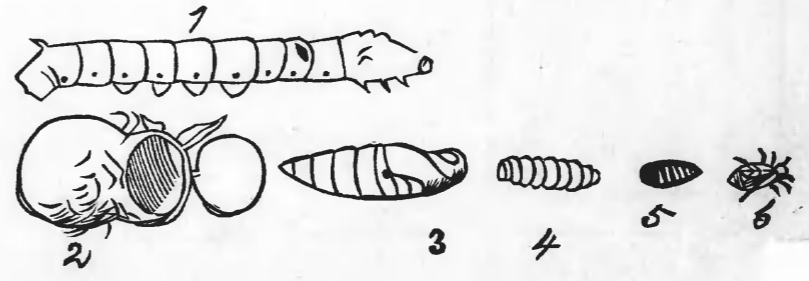
The gross weight for 100 cards being found to be 23lbs on an average 319,829lbs. give total Export of..... 1,390,500 Or an average number of 220 Cards per Case.

The returns of the Custom House for Export, duty paid give a total of..... 1,360,000

The daily returns for arrivals, settlements and stocks from 28 June to December 1st result in total Settlement of..... 1,420,000

Taking the average of the above three figures the total Export, may be stated to be

	Cards in.....
1,390,000.....	1869	
Against 2,300,000.....	1868	
850,000.....	1867	
950,000.....	1866	
3,000,000.....	1865.	



SECOND REPORT

ON THE SILK WORM AND SILK CULTIVATION,

BY

F. O. ADAMS, ESQ.,

H. B. M.'s Secretary of Legation.

Yedo, January 12, 1870.

Since writing my last Report, dated August 7, 1869, I have obtained some further particulars respecting the maggot called Uji, which feeds upon the chrysalis of the silkworm, and also respecting other matters connected with the whole subject treated of in the Report.

There seems to be no doubt that the Japanese are quite wrong in stating that the Uji dies a few days after it leaves the chrysalis. M. Piat, an Italian gentleman residing in Yokohama, has been kind enough to place at my disposal several specimens of Uji in different stages; and I have had the accompanying drawing made, in order to illustrate the subject, for the benefit of the Japanese.

No. 1. is a silkworm, the dark spot on which indicates the presence of an Uji in its intestines. This spot has been observed between the 3rd and 4th moults. Whether it is always to be seen on worms containing Uji, I cannot yet affirm. No. 2 is a cut cocoon. No. 3 is a chrysalis, with a similar dark mark to that on the worm in No. 1. No. 4 is the light coloured maggot, as it appears when it first issues from the chrysalis. No. 5 is the black, dried-up appearance of the Uji after four or five days. No. 6 is the same, with its outer skin taken off, plainly disclosing the embryo of a fly.

It now only remains to ascertain at what period the fly emerges. This must be in the spring; and the fact that Uji are rarely, if ever, found in the summer crop of the Bivoltine, is accounted for on the assumption that the fly into which this maggot turns is hatched during the period of the first crop of worms; and being, like all such creatures, short-lived, dies before the second crop of worms comes into existence. If an Uji is found in a chrysalis of the second crop, the conclusion is, either that that crop is particularly early, or that the fly is a particularly late one.

The Uji also preys upon the *Yama mayu*, (oak silkworm). This variety hatches at the same period as the *Bombyx mori*. I was unable, during my last summer's trip, to visit the district of Matsuyama, in Shinshu, where the greater part of the *Yama mayu* are reared; but some of the chrysalides in the possession of persons in Yokohama have been found to contain Uji.

With regard to the manner in which this parasite is introduced into the body of the worm, the better opinion appears to be that the fly fastens upon the young worm, and, pricking it, deposits its egg or eggs, (for there may be two or more), within the skin; that then, as in similar cases, adipose matter is formed round each egg; that, when the egg is hatched, the maggot feeds upon this matter, and increasing in size, penetrates more and more into the intestines of the silkworm. Recent communications from China favour this theory; the disease seems also to be prevalent in that country, and it would be interesting to obtain from there some details bearing upon this interesting subject.

The Japanese make one fatal mistake. They throw away all the Uji, under the impression that they are dead, or doomed to die in a few days. Now, if, instead of doing so, they would destroy them all as soon as they come out of the cocoons, it seems to follow, as a matter of course, that the number of flies which, according to the present theory, would come out the following spring, must be very materially diminished, and that the disease would be at once arrested. But the Japanese could do still more. When the silkworms are going to spin they should separate all those which, from the black mark upon them, are known to contain Uji, and they should suffocate all the cocoons produced by these worms, thus destroying the Uji at the same time. These cocoons would, of course, be reserved for reeling.

This is a matter which could easily be taken up by the Government. Information should be disseminated throughout the districts that the Uji does not die, but that it turns into a fly, and lays its eggs in the silkworm; and those employed in the trade should be enjoined to destroy every Uji they can find, as soon as it emerges from the cocoon, and to set aside all the worms and suffocate all the cocoons which are known to contain the parasite. In this manner the disease ought to be arrested at once, and it might seem, eventually eradicated. It is not necessary to dwell upon the beneficial results to the silk trade, which would follow the adoption of such measures.

The inspection office (*aratamesho*) which we visited at Yokohama has not fulfilled all the purposes for which it was said to have been established. The only advantage gained is that there has been a certain uniformity in the size and weight of the paper ties. The foul hanks have not been rejected;—indeed I have been informed that what has been bought this season from the agent, Hiramasa, is in general, more tangled and unclean than the produce of the Matsuyama district in previous years.

In fact, the complaints of the degenerate quality of the Japanese silk are universal. I have had some conversation with one of the inspectors, who buys for a house in Lyons, which employs him entirely at home for making goods, and not for speculation. He expresses hopes of selling it again at a profit. He states that he has experienced such difficulty in procuring hanks suitable for his employment that there has been very little really first-rate silk in the market since the beginning of the season.

Other silk inspectors, whilst they have bought a fair quantity, because they hope that a profit on resale may be realized in England, declare that the general quality has visibly deteriorated, the hanks being uneven and very tangled.

As I mentioned in my former Report, one reason for the deterioration is that the Japanese, carried away by the high prices which foreigners have hitherto given for silk, have looked to quantity rather than quality, believing that they can sell at a remunerative price whatever produce they bring to the Yokohama market. Their sole object therefore is to reel their cocoons as quickly as possible, and to get the silk off to Yokohama. More women are consequently engaged at the reeling period, and not only are the hands inexperienced, but being for the most part paid according to the amount which they reel, they do their work in haste and carelessly.

Another cause of the deterioration of the Silk doubtless arises from the immense export of eggs of the best quality. This trade however will not be stopped; as long as foreigners will give high prices for the cards the great merchants from Utsuda in Shinshu, and from Yonezawa and Yonagawa in Oshio, will sell their produce to the former in preference to selling them to the natives. The foreigners not only buy the cards dearer than the natives, but they pay cash, whereas it is the custom of the Japanese buyers to pay only half cash and the other half after the crop.

I must now repeat what I have stated in my former Report, that modern machinery should be introduced into Japan, and that it is essential. The "filatures" used in France and Italy would, as I am told, be entirely suitable for this country. The only objection is that the women who are employed in reeling are much smaller than the European reelers would require the machines to be somewhat different, and other modifications are considered necessary by those who have studied the subject. Once however let the great proprietors in the Silk districts take the matter up, and there can be no doubt that machinery of a kind adapted for Japan would

JAPAN. No. 1 (1870).

Report by Mr. Adams, Secretary to Her Majesty's
Legation in Japan, on the Central Silk Districts of
Japan.

Presented to both Houses of Parliament by Com-
missioners of Her Majesty, 1870.

千八百七十年 五月 日
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大第号アダムス氏著述生絲出
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LONDON:
PRINTED BY HARRISON AND SONS.

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good from the bad. It is said of cards which have been collected from the first-laid eggs of good moths in the way described above that not a single egg perishes during the process of steeping in cold water.

In the spring, about eighty-eight days after the passing of the old lunar year into the new, the seed becomes of a darker colour, and a tiny insect emerges during the night from the eggs. This is the birth of the silkworm. If the seed be good, although there may be 10,000 eggs on the same card, still, the insects should all come out together. If the seed be bad, some of the worms will come out to-day and others to-morrow, until sometimes their birth extends over as much as seven days. The size and strength of good seed being well matched, it seems natural that the worms should be born at one and the same time, whereas bad seed, being made up of big and small, strong and weak, the big and strong worms would make their appearance first, while the small and weak would come forth later.

The little insects are brushed off the paper on to a wooden vessel with a feather brush, and the empty shells are thrown away. The wood of the *Cryptomeria Japonica* is the proper wood to use for the vessel which is to receive the insects.

In the early spring when the mulberry leaves are not yet plentiful, the buds of the tree are plucked and chopped fine and given to the worms to eat. The worms; however, being very small, bran is sprinkled over them, passed through a fine silk sieve, and the mulberry buds are scattered on the top of this fine bran. The reason of this is, that the insects, being as slender as silken threads, would roll themselves up together into hard balls if the buds were given to them alone; but the bran being sprinkled over them, causes them to separate and keep apart.

It also happens that if the worms make their appearance in the very early spring, the flowers of the mulberry are gathered and scattered over them. In this very small state the worms can neither eat the buds nor the flowers; but they probably only suck the juice of the buds and flowers.

From the time when the worms leave the eggs to the time when they form the cocoon is from forty days at the quickest, to fifty days at the slowest.

During these forty or fifty days the worms rest four times, that is to say, four times they leave off feeding. Each of these rests, during which they eat nothing, lasts from four to seven days. The first rest is called the "lion's rest;" the second, the "falcon's rest;" the third, the "boat's rest;" and the fourth, the "garden rest." The people of the silk districts are utterly ignorant as to the origin of these names. The worms from the period of the lion's rest to that of the falcon's rest eat but little of their mulberry leaves; but after the period of the falcon's rest they begin to feed freely. Before the garden rest they feed the most, and it is then of vital importance to furnish them with plenty of mulberry leaves. If there is any failing in the provision of leaves at this period, it is said that when they form their cocoons the grub will be very light.

The mulberry leaves by degrees become twice or thrice as coarse as they were at the beginning. Before the fourth period of rest food should be given to the worm uncut, in the form of branches. After the fourth, or garden rest, the worms cease feeding: at this time the worms shed their skin, this is called the stripping-off of the silk; four or five days after the stripping of the silk the worm begins to form the cocoon.

Straws are broken into triangles and placed in rows in a mat made of straw, and the worms are laid inside these triangles, where they form their chrysalids. Twigs are also in some cases substituted for the straw triangles.

Whilst the worms are forming their chrysalids inside the mat, the good cocoons should be separated from the bad. The bad cocoons should be placed in rows in the mats and baked in the sun. The good cocoons should not be baked; but their moths should be allowed to come out.

If the bad cocoons are not baked in the sun, they will not produce moths, but a white coloured maggot (uji), to kill which is the object of baking the cocoons.

When the worm leaves the cocoon in the shape of a moth, the males should be carefully distinguished from the females, and the couples caused to pair together. Having allowed them to remain together from 6 A.M. until 2 P.M. they should be separated; the male is then thrown away, and the female is placed on a sheet of paper, and allowed to void her urine, and after this transferred to the card, where she is made to lay her eggs in the manner described in the beginning of this paper.

With regard to the time when the moth comes out of the chrysalis, in fine warm weather it makes its appearance early in the morning towards 6 o'clock. In

bad chilly weather it does not leave its shell until later, at about 7 o'clock. The male moth immediately flutters its wings and flits about upon the paper, the female holds down her head and remains still. These phenomena render the distinction of the male from the female an easy matter.

Inclosure 6.

STATEMENT of Export and Value of Silk, and Export of Cards.

Season.	Bales of 80 catties.	Piculs.	Average Value.	Amount in Dollars.	Average Sterling Exchange.	Sterling.	Cards of Silkworms' Eggs.
			Dollars.		s. d.	£	
1860-61	11,318	9,055	372	3,369,864	5 2	870,548	..
1861-62	11,915	9,532	403	3,844,023	5 1	977,022	..
1862-63	25,891	20,712	459	9,493,400	5 1	2,412,905	..
1863-64	15,931	12,744	500	6,374,685	5 0½	1,613,072	..
1864-65	16,523	13,218	617	8,153,031	4 10	1,948,321	..
1865-66	11,619	9,296	744	6,916,559	4 7½	1,605,908	2,000,000
1866-67	13,564	10,852	765	8,304,969	4 7	1,904,468	950,000
1867-68	12,306	9,845	741	7,295,044	4 5½	1,630,591	850,000
1868-69	15,500	12,400	800	9,920,000	4 6½	2,252,666	2,500,000

frequently happens that certain hank silks lose as much as 20 and even 50 per cent. on account of bad winding.

In some cases the threads are so interlaced that the silk cannot be wound at all, and must be sold as waste silk. Some musters of these bad hanks have been returned from Europe to Yokohama. They are exhibited in the room of the Chamber of Commerce, and all Japanese silkmens are invited to look at them.

Last year the Chamber of Commerce complained of the heaviness and irregularity of the paper ties of the hank silks.

Since then some improvement in this respect has been noticeable. Still, the ties are occasionally found to weigh as much as 20 per cent., and even 40 per cent., whilst they should not exceed 2 or 3 per cent. It is true the ties may be weighed and deducted, but this takes a great deal of time and creates great difficulties.

It is true also that the disease of the silkworms has diminished the silk crops of some countries of Europe. For this reason foreigners have paid for the Japan silks high prices as long as they were good; but now they are neglected by the manufacturers on account of their inferiority.

The disease of the silkworms cannot last for ever; when it is cured, can foreigners be expected to buy bad silk in Japan whilst they produce good silk in their own countries?

(d.) The Chinese produce large quantities of good silk. They have formerly been accustomed to reel it coarse, but now they reel some quantities very fine, and imitate the hank silks of Japan. Is it to the interest of the Japanese to deteriorate their silks whilst the Chinese are improving their own?

Is it certain that Japan silk is gradually losing the reputation which it had acquired at first; therefore, the Chamber of Commerce of Yokohama urges upon the Japanese silkmens to take the above remarks into serious consideration.

Inclosure 5.

Paper by Obi Kōtarō upon the Cultivation of the Mulberry Tree and the Rearing of Silkworms.

(Translation.)

THE first matter of importance in the rearing of silkworms is the proper cultivation of the mulberry tree; for on the quality of the mulberry tree depends the quality of the silkworms. Accordingly, we will, in the first place, treat of the mulberry tree and afterwards of the silkworms.

There are three modes of raising the mulberry tree; the first is by suckers from the roots, the second is by layers from the branches, and the third is by sowing seed.

The first two methods are the best, the third is not so good. The process of raising by suckers from the roots is as follows:—

An old mulberry tree is pollarded at a height of from five to eight inches from the ground in such a manner that, no great quantity of shoots issuing from the trunk, the tree throws out suckers from the roots, and from one parent tree some fifty or sixty shoots spring up. Each one of these shoots being separated with its portion of root, is planted by itself, and becomes a mulberry tree.

The process of raising layers from the branches is as follows:—

At the end of spring and the beginning of summer the leaves and branches of the mulberry tree have been almost all cut away, so that there only remain some two or three branches on each tree; but by the end of the summer the tree again puts forth buds which, by degrees, grow and flourish.

The two or three branches which were originally left upon the tree are then bent downwards, and the middle of each branch is laid in the earth and well covered with soil, the points being turned upwards. By degrees the middle of the branch which is buried in the earth is invigorated by the soil, and puts forth roots. When these roots have become sufficiently strong the middle of the buried branch should be carefully cut at the point where it enters the earth, and separated from the parent tree. After a while the point of the shoot thus separated becomes a trunk itself, of which what was the centre now becomes the root, and at last it grows into a mulberry tree.

The reason for preferring the two methods of raising the mulberry by suckers and by layers to that of raising it by seed is, that trees raised by the two former

methods yield little fruit, but large leaves; while trees raised from seed yield plenty of fruit, but small leaves. The mulberry is esteemed in proportion to the quality of its leaves; the fruit which it bears is of no consequence.

The manure which is most esteemed throughout the country for fertilizing the mulberry tree is a mixture of a species of bean (daidzu*) mashed up in lees of saké.† Poor people, however, on account of the high price of saké lees and daidzu substitute a mixture of rice bran and night soil. The mulberry flourishes well with this manure although it is not to be compared with the mixture of saké lees and daidzu.

The manure is applied thrice in the course of the year: once in the spring before the trees put forth their buds, once in the summer after the cutting of the branches, and once in the extreme cold of winter.

The quantity applied depends upon the size of the tree, and upon the quality of the soil. In the case of trees which have been pollarded for the purpose of propagation by layers from the roots, care must be taken, after the removal of the branches, to loosen the earth about the roots, and not to let them be covered by too much soil. If manure is applied to them without loosening the earth about the roots, the soil will harden of itself and tighten round the roots, thus preventing them from putting forth suckers in abundance. Manure, then, must not be applied until the earth has been thoroughly loosened, at a period varying from fifty to a hundred days, according to the temperature of the soil. After the application of the manure, loose earth should be again laid on; and this is said to cause an abundant issue of shoots.

There are cases where the mulberry is pollarded at a height of from 3 feet to 6 feet from the ground, the branches being allowed to grow plentifully at the tops, but being carefully lopped at the middle and bottom of the trunk. This practice should be limited to places where the soil is bad. Good soil, being thick and viscous, does not fly up before the wind. Hence, even if the trunk be short, the earth does not stick to the leaves. But bad soil is like sand, and has no viscous properties, so that it flies up before the wind, and bespatters the branches and leaves, which is a bad thing. For this reason the tree is allowed to grow high, so that it may not be injured by the dirt.

Silkworms.—The rearing of silkworms is very difficult. It depends upon the temperature, upon the quality of the mulberry tree, and upon the skill exhibited in the management of the worms. Unless these three requisites are all propitious, the silkworms cannot be reared.

The first matter of importance is the selection of proper cards. The best cards are those which have been produced under the following circumstances:— Good spring worms are selected, and fed upon the leaves of mulberry trees that have been manured with lees of saké. When the worms have emerged as moths from the chrysalis state, and are about to lay their eggs, care should be taken to prevent them from laying any great number on the same card. They should not be allowed to lay more than from fifteen to twenty eggs, after which the moths should be placed upon another card to lay the remainder of their eggs. In cards on which only the first eggs have been collected in this manner, the eggs are all of an equal size and strong. These are to be considered the best cards.

If a single moth has been allowed to lay all her eggs from beginning to end upon the same card, or if the moth of the summer worm be allowed to lay her eggs on the same card, or if the process is spoiled by various methods of securing the eggs, then the card is of bad quality.

The first eggs laid by a single moth are big and strong; the next are of middling size and strength, while the last are small and weak.

The cards upon which the first eggs have been collected as described above are placed in paper bags and hung from the ceiling. The wind is allowed to play about them, and they are protected from foul smells. Care must be taken not to place a lighted brazier underneath them.

In the dead of the winter the cards are steeped for one night in cold water, and on the following morning they are taken out and dried. After this they must be replaced in the paper bags as before, and hung up. This process is called sarashi, or the bleaching process. In this bleaching process the eggs of bad quality perish, and do not become worms, while the good ones resist it and live. The object of it is to separate the worms that should die from the worms that should live—the

* Daidzu (large bean) is a small round bean, called by Dr. Hepburn in his dictionary *Soja hispida*. It is denominated large in contradistinction to the Adzuki (Shodzu), a smaller variety.

† A liquor fermented from rice.

Inclosure 2.
Map of Silk District.

Inclosure 3.

TABLE of Route.

	Ri chō.
Nakasendō—	
June 22. Yeddo to Warabi	4 8
23. Warabi to Kōnosu	6 22
24. Kōnosu to Kumagaye	4 8
Cross road—	
June 25. Kumagaye to Sakaimachi	7 0
25. Sakaimachi to Mayebashi	6 18
Nakasendō—	
June 26. Mayebashi to Takasaki	3 0
26. Takasaki to Annaka	2 24
27. Annaka to Ojwake	9 24
Echigo road—	
June 28. Oiwake to Uyeda	8 0
29. Uyeda to Oya	1 18
Cross road—	
June 29. Oya to Nagakubo	3 18
Nakasendō—	
June 29. Nagakubo to Wada	2 0
30. Wada to Shimonosuwa	5 8
30. Shimonosuwa to Kaminosuwa (Takashima)	1 18
Kōshinkaidō—	
July 1. Kaminosuwa to Daigahara	8 28
2. Daigahara to Kōfu	7 8
3. Kōfu to Hanasaki	10 6
4. Hanasaki to Yose	8 23
5. Yose to Hachōji	4 17
Cross road—	
July 6. Hachōji to Haramachida	5 0
6. Haramachida to Yeddo	8 0
	117 32

Inclosure 4.

Extract from the Half-Yearly Report of the Yokohama General Chamber of Commerce, July 1868:
(Translation.)

THE Chamber of Commerce of Yokohama has been requested by the silk merchants of Europe and America to communicate to the silkmens of Japan several complaints regarding the silk exported from this country. Their complaints are as follows:—

1. The quality of the Japan silk is getting worse every year.
2. Large quantities of silk produced in Oshiu, Koshu, and other countries are made up in hanks so as to be sold as Mayebashi and Shinshu silks.
3. A great quantity of hank silks wind badly, thereby causing great loss to the buyer.
4. The paper ties of the hank silks are too heavy.
 - (a.) There is a great variety of cocoons in Japan; they are not all of them fit to be reeled into fine silk, and the silks produced in different countries of Japan are applied by the manufacturers of Europe to different purposes.
 - (b.) Formerly the silk of each country was made up in a particular manner, so that each foreign manufacturer was able to choose the quality which suited his requirement; but now he is frequently deceived, because a great variety of silks are made up in hanks. Formerly a great many Japan silks were firm, clean, and strong, some of them were very fine and regular in size; but now it appears that the Japanese reelers mix the bad and good colours together, and reel them without the proper care. The result is that the silk is foul, irregular in size, and that the colour of it is bad.
 - (c.) Formerly the Japan silks, and particularly the hank silks, used to wind very well, so that the loss in weight to the throwster was very small. Now it

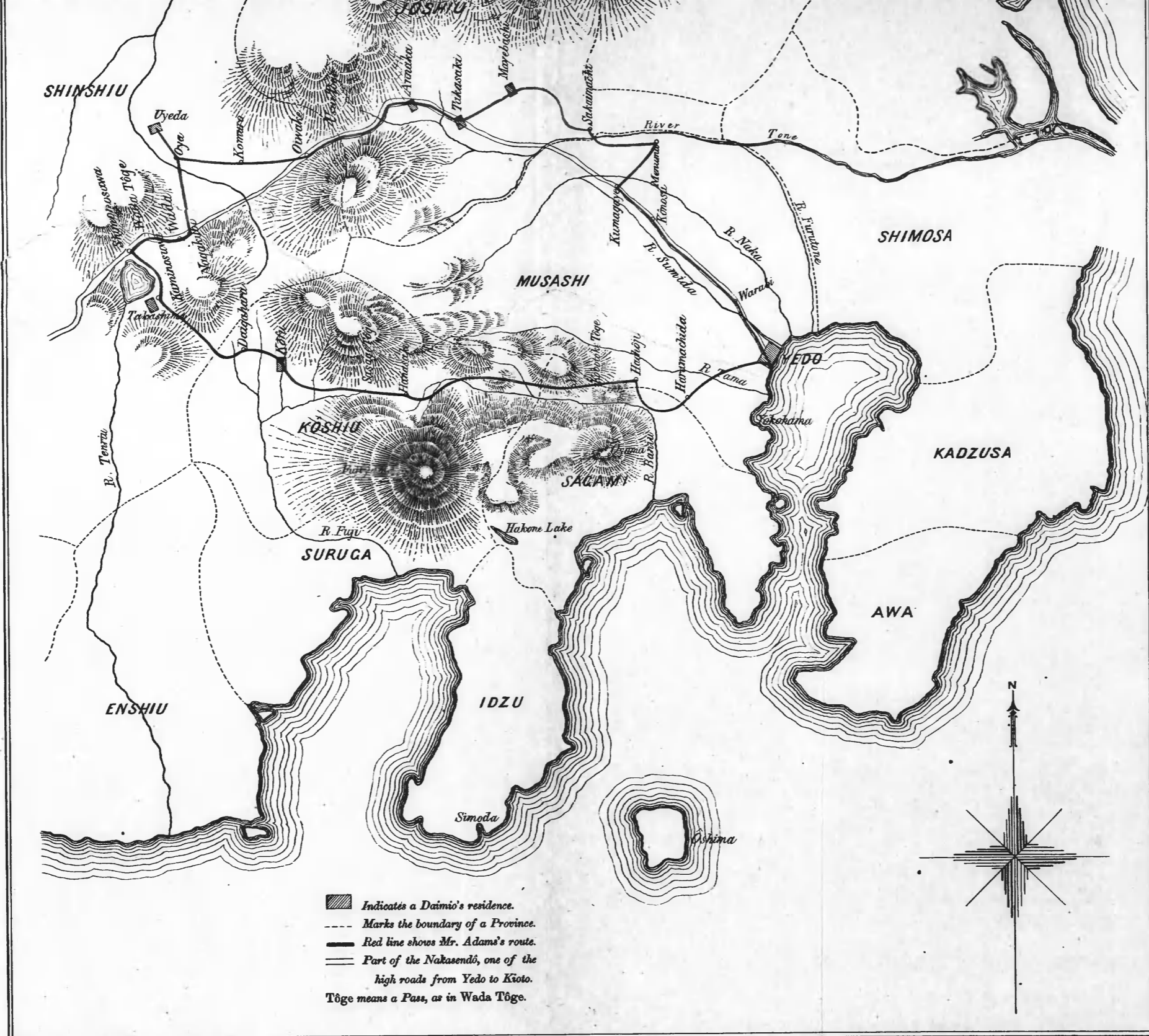
observed were:—
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the cultivation of the mulberry has increased, the export trade has remained stationary?

The following considerations seem sufficiently to answer this question:—

1. The trees planted during the last few years are still far from being in full bearing.
2. The benefit derived from the abundance of leaf is often greatly neutralized by a number of circumstances unfavourable to the rearing of the worms, which we are as yet unable fully to appreciate.
3. The great increase since 1865 in the production of silkworms' eggs has diverted from the production of silk an enormous quantity of cocoons. Indeed, that quantity would seem incredible, if computed by the rule of proportion between cocoons and eggs, as estimated by silk-growers in Europe. It is, however, accounted for by the ravages of the uji in the cocoons, destined for the production of eggs.
4. The proportion of silk kept in Japan for home consumption, cannot be accurately estimated.

The establishment of a special office at Mayebashi for the inspection of the silk of that district has been mentioned. This is as yet apparently but an isolated fact; still, if the experiment results in an improvement in the quality of Mayebashi silk, it would seem probable that the example of Matsudaira Yamato no Kami will be followed by other Daimios.

What, however, Japan especially requires, is the introduction of European machinery, and of the system of silk-reeling, which has been brought to such perfection in Europe. There are indications of the Japanese being aware of the great importance of such an innovation; but in order to buy modern machinery, and bring it to this country, and in order to create large establishments on the model of those existing in Europe, capital is required; and, looking to the existing state of affairs in Japan, capital is not likely to be forthcoming at the present moment, at least not from native sources.

The first great requisite of a reeling establishment is, to lay in such a store of cocoons as will allow of work being carried on without interruption during the greater part of the year. There is no reason why this should not be done in Japan, inasmuch as the climate in such large centres of production as Jōshiu and Shinshiu permits of the cocoons being kept without injury for a long period.

Of all the districts that we visited, we saw the finest cocoons, and the healthiest moths, at Uyeda. There, the production of eggs has largely increased. Shinshiu, as before remarked, supplies the adjoining provinces with seed, and the demand for eggs by foreigners has stimulated the supply. In some parts of Kōshiu the cocoons and the moths were very poor.

To recapitulate, the unfavourable symptoms which we observed were:—

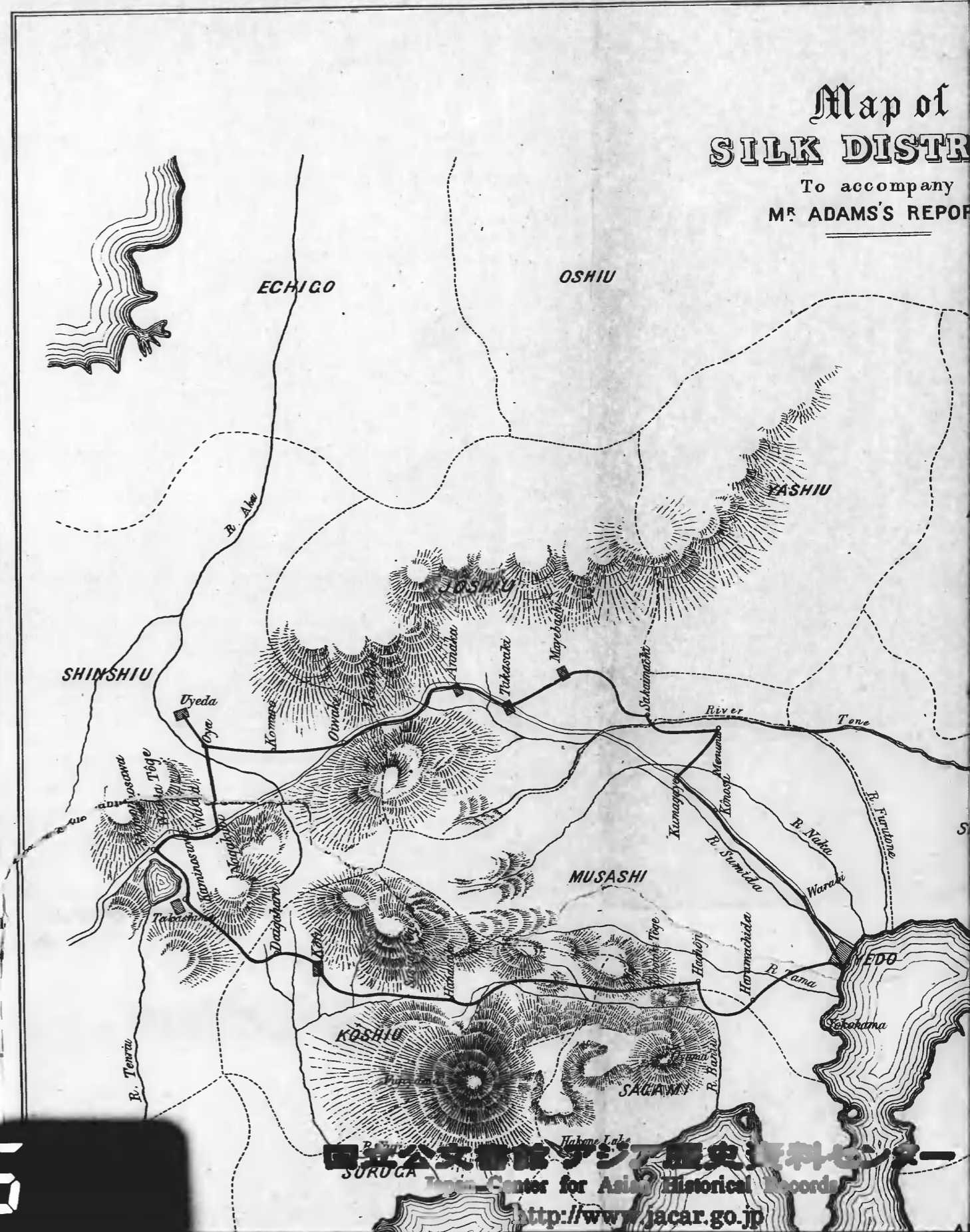
- A prevalence of the uji to a greater extent probably than has been known for years; hence the likelihood of more silk and fewer cards this season;
- Much carelessness in the handling of the worms and the reeling of the silk
- European machinery and system are therefore greatly required;
- The bad method of suffocating the chrysalides in the sun or over hot charcoal instead of by steam.

On the other hand, the hopeful signs may be said to be:—

- An increase in the cultivation of the mulberry;
- The establishment in more than one district of new buildings for the sole purpose of rearing silkworms;
- The establishment of the Inspection Office at Mayebashi.

In conclusion, the Japanese state that the crop of cocoons this year is about equal to that of last year, notwithstanding the unusual ravages of the uji. The damage which this parasite has caused during the present year is probably exceptional, and the cultivation of the mulberry is on the increase. Inasmuch, therefore, as the export of silk and eggs in the season of 1868-69 shows a decided advance on the previous season, it seems fair to conclude that there will henceforward be a gradual increase in the silk trade of Japan.

(Signed) F. O. ADAMS.



the notch of the corresponding bamboo rod to the winder, where they are tied, and the apparatus is then set in motion.

The combined threads have already been subjected to a certain friction as they glide over the smooth surface of a thin round rod placed across the basin; as they go through the hair ring, the tension and friction increase, and they agglomerate, thus forming "the silk thread." This simple process produces, to a certain extent, the same result which is obtained in Europe by more elaborate contrivances.

When one or more of the original threads (bouts) break, the reeler throws in fresh ones just below the round rod; this operation, which requires great delicacy, is often carelessly done; the fresh threads are drawn in among the others by the rapidity of the motion; but they may have been seized at some distance from the extremity; and when this happens, the ends, being free, become twisted; and form knots and irregularities on the surface of the skein. Sometimes a careless reeler will allow several of the original threads (bouts) to break without replacing them at once; and then, after an interval, during which the winder has been kept going at full speed, she will throw in at the same moment a number of fresh ones. This want of proper attention on the part of the reelers causes the irregularity in the size of the thread which is observable in most Japanese silks.

We noticed that the basins were seldom kept in proper order; the cocoons which had fallen to the bottom were left there in great numbers and were damaged by remaining too near the fire. Neither were the cocoons which were being reeled kept clear of the reserve, and the reeler often got confused in her work.

The water in the basins was hot enough, but the women had no bowls of cold water at hand to dip their fingers in. Notwithstanding this, their fingers were free from ulcerations, which is not always the case with the reelers in European establishments. Hence it would seem to follow that the water is not made so hot as in Europe, and my companions were able to confirm this by testing its temperature on several occasions.

In the reeling apparatus which we have described, the distance from the surface of the basin to the top of the winder does not exceed two feet. The chances of the thread breaking are thus diminished to a minimum, and it does not dry up before it reaches the winder. The latter being in such close proximity to the basin, the skein of silk is kept in a continual state of moisture by the steam. When the weather is very dry, the reeler sprinkles the skein with hot water. This practice causes the original threads to agglomerate more closely, and the gum which covers the surface of the silk thread to dry more evenly.

The Japanese peasant who does not sell his cocoons has them reeled at home. In most of the villages through which we passed, two or three girls were to be seen at work in many of the houses. Six and occasionally twelve were employed in the larger establishments of Mayebashi and Kôfu. At Mayebashi we noticed that the boiling of the cocoons was entrusted to one girl, who afterwards distributed them among the reelers.

In Kôfu we had an opportunity of visiting an establishment where twelve winders were worked on a common axle; the reelers sat squatting in front of the winders, and there was a boy or a girl, whose especial function it was to keep the apparatus in motion.

In the neighbourhood of Hachôji we saw some reeling machines, the winders of which were turned without any cog-wheel. There being no special contrivance for reeling the silk in the proper zigzag manner, this operation is roughly performed by working the thread between the fingers. Such rude appliances are, however, now but seldom seen, and the apparatus which we have described is in general use.

The girls employed in reeling are generally industrious and clever; but doing much work seemed rather to be their object than taking great pains and doing it well.

With regard to the weight of waste silk, and silk reeled from a given weight of cocoons, and to the quantity of work done by the reelers in a given time, the answers which we elicited were so conflicting that it was impossible to arrive at any satisfactory conclusion.

Re-reeling the Silk.—The two winders on which the silk is reeled being generally turned by the hand of the reeler herself are necessarily small and light, so that the circumference of the skein is only 2 feet. The silk has therefore to be re-reeled into a larger skein before it is made up into hanks or bundles, and offered for sale.

The re-reeling machine is composed of a long horizontal winder about 4 feet in circumference, the axle of which is supported on two perpendicular shafts, at a distance of 5 feet from the floor.

Half-way between the floor and the re-reeling winder, and in a line parallel with it, a flat rectangular piece of wood is fixed between the two supports. To this piece of wood are attached ten or twelve semi-circular rings made of wire, at equal distances from one another, a small winder being placed endwise on the floor exactly under each one of the semi-circular rings.

The silk threads being passed through the rings are tied to the re-reeling winder. On the latter being put in motion, the threads leave the lower winders with a circular motion, which becomes so modified by passing through the semi-circular rings, that each thread does not spread over the surface of the larger winder more than 3 or 4 inches.

When the silk on the small winder is found to have become dry, it is moistened with water, to prevent it breaking when re-reeled: it does, however, break sometimes; and when this happens, the end is often carelessly tied, or the loose end is simply thrown upon the large winder without being tied at all.

The uniformity of the spreading of the silk on the re-reeling winder depends upon a certain relation between the shape, the dimension of the semi-circular rings, and the rapidity of the ascent of the thread from the small winders to the larger one. Unfortunately this uniformity is by no means always kept up. Hence arises that irregularity of interlacing which has been so much complained of by European buyers of Japan silk, and which sometimes produces such a tangled hank that it can only be sold as waste silk.

It is also during the operation of re-reeling that silks of different thicknesses and quality are often mixed up together, that of the best quality being of course placed upon the surface of the skeins. This fraud, which often deceives the buyer, is one of the defects mentioned by the Chamber of Commerce in the paper circulated by them last year.

Bivoltini.—The Bivoltini worms yield, as is well known, two crops a-year.

In the spring they hatch at the same time as the annual worms. They also cast their skin four times, but the intervals between the stages are shorter than in the case of the annual worms, and they are reared separately.

The eggs of the first crop hatch in June or July, according to the season, and the second or summer rearing ends during the month of August.

The eggs produced by the second crop are called Natsugo, or children of summer; they do not hatch till the following spring.

The eggs of the annual variety are called Harugo, or children of spring.

We did not hear of any Bivoltini being bred in the central provinces.

The Bivoltini cocoons produce much less silk than the annual, and, as has already been mentioned, the summer crop does not seem to be attacked by the uji. At least, the Japanese were very positive upon this latter point.

I have added to the Report the translation of a paper furnished to me by a Japanese in my employ, who accompanied us on our expedition. It treats, as will be seen, of the culture of the mulberry and of the rearing of silkworms, solely with a view to obtain eggs. I have thought that a paper upon these subjects from a native point of view would not be uninteresting. The writer informs me that he obtained most of his information at Mayebashi.

I am indebted to Mr. Mitford for the translation of this document.

Setting aside the unusually large export of silk in 1862-63, which was caused by the influx into the foreign market of long accumulated stores, the statistics of the silk trade of Japan since 1860, as given in the annexed Table, show that notwithstanding a steady demand on the part of foreigners, and a no less steady increase in the price of silk, there has been no corresponding increase in the export of that staple.

Now, the repeated inquiries which we made during our journey led us to the conclusion that, though in some districts the cultivation of the mulberry has remained stationary, it has increased considerably in other districts during the last three or four years. The number of new plants which we saw on our road through Musashi, Jôshiu, and Shinshiu, also lead us to the same conclusion.

How, then, is the apparent contradiction to be reconciled, that whilst

cocoons is about forty days. Six or seven days after the latter period the cocoons are removed from the mabushi, and the owner then decides whether they are to be kept for reeling or for eggs.

When they are intended for the latter they are placed in a single layer, so as not to overlap each other, upon the same trays that have been already used during the feeding period, and they are covered with sheets of paper pierced with holes at regular intervals of two or three inches.

In fourteen or fifteen days more the moths begin to emerge from the cocoons; as is the case in other countries they generally come out at dawn, and the operation lasts for several days in succession. As the moths instinctively seek air and light, they soon pass through the holes of the paper, and shortly afterwards begin coupling upon its surface. The couples are then removed and placed upon other sheets of paper in some dark place where they are left undisturbed till the afternoon.

If the male moths come out in greater numbers than the female they are placed apart in a basket, in case they may be required the next day. When there is a greater proportion of females the Japanese have no scruple in making the males serve for two successive couplings.

At 3 or 4 o'clock p.m., those couples that have not yet separated are severed, and the females, having been purged, are placed upon cards, where they lay their eggs till the following morning. At Kōfu we saw a large number of females which had laid their eggs on the previous day, and had been removed to another card upon which they were all huddled together. The object of the removal of this card was to avoid losing the few stray eggs which these moths might lay on the second day. This appears to be the general practice.

The number of females required to cover a card was estimated very differently by our informants. At Uyeda we were told that fifty or sixty were sufficient, but that in consequence of foreigners having a preference for thickly covered cards, as many as from 100 to 130 moths were used. At Kōfu we were informed that no less than 250 were required, but this was accounted for by the fact, which we ourselves observed, of many females dying without being able to lay the whole of their eggs. These moths were evidently in very bad condition, some of them being stained with dark spots, and quite devoid of energy.

In Shinshū we found, generally speaking, cocoons of good quality, and clean and healthy moths. It was only amongst the double cocoons that we noticed a few moths which had not strength to make their way out. The eggs were laid with regularity, and the appearance of the cards was favourable.

At the little village of Komaki, on the left bank of the river, near Uyeda, we went into a house where a quantity of healthy moths had just emerged from the cocoons. The owner stated that his moths were always the earliest in that district, and that his cocoons were peculiarly free from uji, which he attributed, without assigning any better reason, to the proximity of his dwelling to the river. He said that he placed about 120 females upon each card.

This man showed us the wooden frames in which the cards are fixed when the females are going to lay their eggs on the latter. These frames are of the same size as the cards, their rims being varnished in order to prevent the moths, who dislike varnish, from laying their eggs elsewhere than on the cards.

In other places the frames are made large enough to admit of from nine to twelve cards being laid side by side. At Kōfu the frames that we saw were made for nine cards. By this arrangement the females have a large even space to wander over, until they have fixed upon a spot for laying their eggs; the rims were not varnished.

When the cards are quite filled they are hung in the shade in some dry well-ventilated place, till the eggs, which are yellow at first, gradually assume the grey or green hue peculiar to the Japanese produce.

Care should be taken not to move the eggs until they have become hard, after which time they can be safely transported to any distance.

Silk Reeling.—When the cocoon is intended to be kept some time before being reeled, the chrysalis must be killed in order to prevent its egress as a moth, and the consequent deterioration of the cocoon. This is effected in Japan by exposing it to the heat of the sun. When the rearer has removed his cocoons from the mabushi, and taken off the thin web which surrounds them, he divides them into good, bad, and double cocoons, and placing them in single layers on the trays, exposes them to the sun. This system, however, is a very unsatisfactory one. It requires a strong sun

during several days in succession to kill the chrysalis, and this operation unfortunately coincides with the rainy season, so that it is frequently interrupted before its completion, and the uji, sometimes the moth itself, will come out, thereby destroying the cocoons for reeling purposes. We ourselves often saw uji crawling about on the trays which were placed in the open air.

When a protracted absence of sunshine leaves no other alternative, the cocoons are subjected to the action of a charcoal fire; but this is a very slow and expensive process; and this system being only adopted in the last extremity, the work is done in haste, and the cocoons are often damaged in the baskets when they are placed over the charcoal braziers.

After the chrysalis has been suffocated, the inferior and stained cocoons are generally reeled at once; and it being intended to keep the good ones for some time, the latter are carefully dried and stored in proper bags. Occasionally, on a dry sunny day, they are taken out and dried to prevent mildew.

A great number of the peasants and villagers reel their own cocoons, but there are in the silk districts regular markets where those who desire can sell their crops.

The mode of reeling the silk is very similar in all the districts we visited. This delicate operation is left to the care of young women, and is carried on in the following manner:—

The reeler sits squatting before a cast iron basin placed upon a portable stove, and filled with pure water. It is not the custom to mix the water with the juice of the chrysalides or any other substance. Within easy reach of the woman's left hand are two small four-armed winders about 2 feet in circumference. These both work upon the same axle, and are put in motion with the left hand by means of a cog-wheel. The reeler will use both winders, or only one, according to her degree of proficiency. Skilful girls will reel two threads at the same time, and thus make two separate skeins, one upon each winder.

A horizontal shaft is placed under the winders; a slight motion from right to left is communicated to this shaft by means of a small cog-wheel working in the one already mentioned. Two bamboo rods are fixed in the shaft at right angles; their other extremities are slightly notched; the silk thread has to pass through the notch before reaching the winder, and the object of this contrivance is to cause the thread to cover the winder in a zigzag manner. Otherwise the skein could not be re-reeled.

Precisely under the bamboos, two rings, each made of a lock of hair, are fixed at a few inches from the edge of the basin: their use will be explained presently.

Within reach of the reeler's right hand a single winder is placed, which is also turned by hand, without a cog-wheel.

The first operation in reeling consist of taking off the outer covering of the cocoon, which is not pure silk, and produces a thread called noshi. A certain number of cocoons are thrown into the basin containing hot water, and heated to the proper temperature. The reeler then agitates the cocoons with two willow sticks; when she has collected the threads (called "bouts" in French) of all the cocoons at the extremity of the sticks, she takes them together in one hand, and tears them away from the sticks; then she rolls them into one thread between her fingers, and throws the thread thus formed upon the winder placed on her right side; she now proceeds to turn the winder slowly till all the noshi is exhausted, and the pure silk begins to appear.

By this method a coarse thread (noshi ito) is produced, which is used in the manufacture of certain common silk stuffs, but we noticed that the process involved considerable loss of pure silk.

The reeler then cuts the noshi thread and ties together the ends of the now pure silk to a small hook which is fixed to the right on the edge of the basin. Sometimes, however, she takes the cocoons out of the basin by means of a small bamboo basket, and plunges them into another basin filled with cold water, where they are left till the noshi has been taken off a large number of cocoons, and then she can reel the pure silk continuously off the whole number.

When the woman proceeds to reel the pure silk, she detaches from the cluster of threads on the hook, four, five, or more, according to the thickness which she intends to make the silk; she passes these combined threads through one of the hairs which compose one of the rings of hair above-mentioned, and thence through

6 feet above the floor. The trays can be easily moved on and off the shelves. There should be a good space between the uppermost shelf and the roof, in order that all noxious effluvia may ascend and not injure the health of the worms; but the want of room often prevents this being done, and the health of the worms must suffer accordingly.

During the period of feeding, the mulberry leaves are not plucked from the branches, but the branches themselves are cut and brought home in bundles. The leaves are then cut off, and in the earlier stages are chopped very fine, and given frequently, but sparingly, to the worms. As the latter increase in size, the leaves are divided into larger portions for their food; and when they have cast their skin for the third time, not only the whole leaf, but even small twigs are given to them, and they are fed copiously at longer intervals. After they have cast their skin for the fourth time, whole branches are strewn over the trays, whereby the worms have more space to move about, and the litter is healthier.

The leaves should be eaten by the worms in a dry state; and if it is impossible to avoid cutting them when moist, through rain or dew, they should be carefully dried at home. This precaution, however, is neglected by some breeders, so that their worms are often fed upon moist leaves. In some instances water, with a slight mixture of saké, is sprinkled over the leaves, in order to stimulate the appetites of the worms, when the peculiar state of the atmosphere renders them dull and heavy.

The litter formed by the refuse of the leaf should be regularly and constantly removed, though many breeders only take it away once between the different stages. This operation is generally effected by taking up the worms with chopsticks, and then removing the last layer of waste leaves with the hand; but in well-conducted magnaneries, nets stretched on very light frames of the same dimensions as the trays are laid over the worms, and fresh leaves are spread upon the nets; the worms, allured by the fresh leaves, climb up to the nets, and they are then transferred to another set of trays.

The double operation of feeding the worms and removing the litter is greatly facilitated by the lightness of the bamboo trays, and by their being placed on the shelves, as above mentioned. One man, or two young girls, can easily draw a tray from the shelf, lay it on the floor or upon a pair of stools, and when the work is finished restore it to the shelf.

Still, there can be no doubt that the worms are often dealt with very roughly. Those that are casting their skins are sometimes mixed in the same tray with those which have, and others which have not, undergone this operation. Those whose time for rest has arrived would naturally be disturbed by the feeding of the remainder.

When the time for spinning the cocoon approaches, two or three flexible rods or split bamboos are placed lengthways on the trays with their extremities resting against the borders, so as to form a slightly curved arch over the surface of the trays. Dry twigs, generally of rape, but sometimes of pine or rice straw, are loosely spread over the arches, and form a thick airy bed called "mabushi," upon which the worms spin their cocoons.

In well-conducted magnaneries the transfer of the worm to the mabushi is effected with the utmost care; but in most other cases this operation is left to young girls, who take up by handfuls all the worms which are apparently ready to spin, and transfer them roughly to the mabushi. The fact that the worm deserts the leaf and rambles along the borders of the tray is a sure indication that it is ready to spin, and all such are generally removed by the girls; but there are others which, though ready for the mabushi, remain quiet in the tray, and are only to be detected by the pale transparent colour of their skin; the girls, whilst looking for these, sometimes through carelessness, or want of proper light, gather up some that are still feeding, and hence worms are often to be seen on the mabushi vainly seeking for food, and these finally spin cocoons of a very inferior quality.

The structure of the mabushi is not always as good as it should be, and the worms are sometimes too closely heaped upon it, so that two or three worms will often join together in spinning one cocoon, and there will be an undue proportion of double cocoons in the crop.

As soon as the worms have commenced spinning, the mabushi is covered with a thin mat, and placed upon a shelf, the space between the tray and the bed of twigs being sufficiently wide to allow a free circulation of air. In eight or ten days the twigs are found to be so firmly connected by the silk-web spun by the

worms, that the whole bed can be removed from the tray, and, if room is required, it can be gently doubled up and hung from the ceiling until the household have leisure to remove the cocoons from the twigs.

The Uji.—Our inquiries amongst the Japanese did not lead to the discovery of any disease of an endemic or epidemic character. During the feeding season the worms appear to suffer chiefly from the sudden changes in the temperature, and the heavy rains which fall so frequently between April and August. A hoar frost in April or May will injure the young leaf intended for the newly hatched worms; a storm or damp cloudy weather will all at once deprive the worm of energy, leave it without any appetite, or prevent it from spinning its cocoon; again, a sudden cold will arrest its progress. Sometimes a mortality will all at once prevail among the worms shortly after the fourth casting of the skin. The Japanese attribute all such disasters to the weather, and could tell us of no other cause.

Several diseases are known to affect the worm and the chrysalides, but I will here confine my remarks to certain details respecting the disease which is caused by the presence in the chrysalis of a parasite called "uji."

The word "uji" signifies a maggot.

The Chinese character given for it in Dr. Hepburn's dictionary is "chū" ("tseu," according to the spelling of Morrison, who defines the word as "worms, vermin amongst putrid flesh?"). In the book entitled "Yō san hiroku" (Record of the Secrets of the Culture of Silkworms), it is stated that there is a maggot which preys upon the silkworm chrysalis, and is called "uji" in the eastern provinces of Japan, and "koro" in the eight central provinces, and that it is also called "bō."

The uji is annulated, without feet, and when of full size is sometimes nearly as large as the chrysalis itself. During the period which follows the formation of the cocoons, this maggot kills the chrysalis, on the substance of which it has been feeding, and, having attained its full development, it pierces the cocoon, and renders it useless for anything but floss-silk.

There is fortunately a sure indication of the presence of the uji. If a cocoon be opened, and one or more dark spots are observed upon the chrysalis, one or more uji are certain to be found in its intestines. Breeders are, therefore, in the habit of opening a certain number of cocoons, and when they discover a large proportion of uji, they lose no time in baking the cocoons in the sun with a view of reserving them for reeling, or, if they desire to raise eggs, they can compute the probable loss in chrysalides.

The numerous experiments which we made during our journey enable us to state that, in the most-favoured district of Shinshiu, the proportion of uji was from 30 to 40 per cent.; in another part of Shinshiu, not far from the confines of Kōshiu, an experiment gave 56 per cent., besides 10 per cent. of dead chrysalides; in Musashi, Jōshiu, and Kōshiu, the general proportion was from 60 to 70 per cent.; and in one district of Kōshiu it even reached 84 per cent. Last year the average is said to have been only from 10 to 25 per cent.

We were told that the uji were more numerous than usual this year, and if this is the case, which appears probable, more silk and fewer cards are to be expected in the Yokohama market.

According to our information the spring chrysalides alone are effected by Uji, whilst those of the summer worm contain no such maggot.

The uji are sometimes found in cocoons of such good quality that they could only have been produced by the healthiest worms. Hence it seems probable that this maggot exists in germ in the caterpillar, and does not affect its health till after it has turned into a chrysalis.

One theory, which appears to be the true one, and has been held by several foreigners, is, that during the spring a species of fly deposits its eggs on the mulberry leaf, and that these eggs being introduced with the leaf into the silkworm's intestines, turn into uji after the worms have arrived at the chrysalis state. The very meaning of the word uji favours this theory.

After the uji has left the cocoon its colour changes from pale yellow to reddish brown, gradually becoming darker and darker, and it shrinks up to a third of its size. After three or four days it becomes quite hard and nearly black.

The origin of the uji seems to be utterly unknown to the Japanese. They say that the dry uplands of the interior are less infected by it than the low damp localities, or the districts bordering on the sea.

The Period during which the Moth lays its Eggs (Grainage).—The time which elapses between the hatching of the eggs and the commencement of the formation of the

I will now proceed to record the result of our observations under the following heads:—

The Mulberry Tree.
The Silkworm.
The "Uji."
"Grainage."
Silk Reeling.
Re-reeling.
Bivoltini.

The Mulberry Tree.—The increasing demand for silk since Japan has been open to foreign trade has stimulated the production of the mulberry tree, and we were able to satisfy ourselves at different points of our journey that its cultivation is decidedly on the increase.

In general, the trees are planted along the borders of the fields; sometimes they appear in rows across them, at such intervals from each other as not to interfere with the other crops. At Uyeda, in Shinshiu, however, large fields are entirely devoted to the cultivation of the mulberry, the dwarf trees being planted on ridges, in lines at a distance over 2 feet from each other, the ridges being more than 3 feet apart. But this was a solitary instance, as far as our observation was concerned.

As a rule, the tree is kept in a dwarf state, the stumps not being allowed to grow more than from 10 to 18 inches above the ground. Sometimes they are permitted to attain a height of 4 or 5 feet, especially when they are grown in the middle of the field. The few full grown trees which we observed were generally in the vicinity of dwellings.

The reason alleged by the Japanese for preferring the dwarf to the full-grown mulberry is, that the leaves of the former are softer and better adapted for feeding the worms.

Several kinds of mulberry trees are cultivated in Japan; of these, as we were told, the most common are—

The Yotsume, the Nedzumigaishi, the Oha, the Kikuha.

These species are all known in Europe. The yotsume has a narrow, irregular, and deeply indented leaf, and is the earliest of the several kinds; its buds and tender leaves are given to the worms during the first few days after their birth. The other three kinds bear the ordinary oval leaf, with regular serrated edges.

Three modes of reproducing the mulberry were described to us; from seed, from cuttings, and from layers. The latter is the favourite mode, and was stated to be as follows:—

At the end of June, the branches of a good healthy tree are bent to the ground, the middle portion being hidden in the earth, and the ends pointing upwards. By degrees the portion in the earth takes root, and in the following month of April the ends are divided from the parent branch, and are then removed to a ground which has been carefully prepared as a nursery.

After twelve months, the shoots or young trees are transplanted from the nursery to the field where they are intended to remain permanently, and it is only after another twelvemonths, making a total of three years from the period of layering, that the branches are fit to be cut for the purpose of feeding the worms.

The plantations are manured three times a-year; in January, April, and July. Night soil, the lees of saké (a liquor fermented from rice), the lees of rape-seed after the oil has been pressed out of it, the excrements of the silkworms, carefully dried and preserved, decayed vegetable matter, &c., are used for that purpose. In July, straw mixed with manure is sometimes buried at the foot of each tree.

In Shinshiu, where the greatest care is taken in the cultivation of the mulberry, manure is applied to the soil a fourth time, in October. The finest nurseries are situated in the valley of Uyeda, where the dry sandy soil near the banks of the river is justly considered by the Japanese as the most favourable spot for rearing the mulberry.

Pruning is practised once a-year, between April and July, at which period the branches are cut, and carried away for the feeding of the worms as hereafter described. A certain number of trees are, however, left untouched in almost every plantation for the second rearing of the "bivoltini" worms. This takes place immediately after the first rearing, viz., in July or August, according to the season. The full-grown hard leaves of the unpruned mulberry are given to these summer

worms after the second casting of the skin, up to which period they are fed on the tender new sprouts which have been plucked by hand off the pruned trees.

The autumn leaves are allowed to fall, and are used as manure.

After a period of from forty to fifty years the trees are considered to be exhausted. They are then taken up by the roots, and replaced by new ones.

The Silkworm.—The trade in silk and silkworms' eggs has evidently been a source of increased prosperity to the population of the provinces which we visited; for instance, both on our road from Menuuma to Mayebashi, and in Uyeda, we noticed a number of newly-built houses for the rearing of silkworms.

These buildings, called in French "magnaneries," are generally situated in an isolated and well-ventilated spot; they are constructed much after the fashion of most Japanese houses, and a description may be interesting, to those who have not been in this country.

They consist of a solid framework of wood, the corner posts resting on stone foundations, and the intervals between the posts being made of trellised bamboo, covered with an inner and outer coating of dried mud; they are two-storied, floored with planks, and communicate with each other by means of a sort of ladder, which can hardly be dignified by the name of stairs. There is no ceiling between the second story and the roof, which is made of tiles, thatch, or shingle spread over with heavy stones as a defence against the high winds and hurricanes. On three, if not four sides of the building, there are the usual outside sliding doors or shutters of wood, working in grooves; and these are only closed at night or in bad weather. There is a verandah between them and the paper slides, which serve instead of windows, and provide light and air as required. These slides consist of light wooden frames of trellis work, covered with paper. Sometimes a well-protected aperture is seen in the roof, thus completing the system of ventilation. A thermometer is generally not wanting. In one of these buildings which we entered they told us that the room had to be kept up to 70° Fahrenheit, and that if the temperature fell below that point a charcoal brazier was immediately lighted. In the largest "magnaneries" there is sufficient space to rear the produce of ten cards; but there are as yet few of these establishments in Japan. As a rule, the peasants rear their worms in the upper story of their own dwellings, the family living on the ground floor; but when the upper story is not large enough, every available corner in the house is used to accommodate the silkworms.

The time for hatching varies from the 20th April to the 5th May, according to the altitude and the season. As soon as the temperature is favourable, and the early leaves of the mulberry begin to sprout, the cards are taken from the paper bags in which they have been hanging from the ceiling, and are suspended in the open air in a shady spot. Sometimes the first few worms which are hatched are thrown away, because they are looked upon as weakly, or because it would be troublesome to rear them apart; sometimes they are kept without food until more come out. The hatchings of two days are then deposited on small wooden frames covered with paper. This operation is performed either by shaking the card over the frames, or brushing off the insects gently with a feather.

For the first two or three days the worms, as already mentioned, are fed with the young buds of the yotsume mulberry. These buds are cut fine, and spread amongst the worms. Some give the worms no food at all during this period; others feed those which are first hatched sparingly, and give the later hatch plenty of food, in order thereby to equalize as much as possible the development of the worms. Others, again, as we were told, prefer that the hatching should extend over a longer period, so that the worms may not reach the last stages all at once, and thereby cause too great a pressure of work at the same moment.

The worms are speedily removed from the frames on which they are laid after hatching, to mats 6 feet long by 3 wide. These mats are covered with a layer of rice husk, and placed on the floor, but as the worms increase in size, and a greater number of mats are required, the latter are deposited on wooden boards or tables of the same dimensions as the mats. These tables stand upon four feet, the feet being 6 inches high, and they are placed upon one another in order to economize room. There the worms sometimes remain till they are ready to spin their cocoons, but more frequently they are removed after the second or third casting of the skin to bamboo trays of trellis work, of the same dimensions as the mats, and surrounded by a low rim, to prevent the worms from straying off them.

These trays are usually placed upon shelves fixed along the wall in rows one above the other, at a distance of 6 inches, the uppermost shelf being about

the present purpose. I also annex a Table containing the names of a number of towns and villages through which we passed, and the distance between them in "ri," as nearly as they can well be computed from the Do-chiu-ki, or road-books. A "ri" is calculated to be 2.442268 English miles, so that during our journey we rode from 280 to 290 miles.

Owing to the practical knowledge of my companions, and to their acquaintance with Japanese merchants at each of the principal silk depôts, we experienced little delay in obtaining the information we desired, and we were thus enabled to cover a large extent of ground in the fortnight.

Before proceeding farther, I wish to state that I am indebted in a very great measure for the substance of this Report to my three companions, Messrs. Davison, Piquet, and Brunat, they having kindly placed at my disposal the copious and valuable notes which they had collected. Mr. Wilkinson acted as our interpreter, and I am sure that I am expressing the sentiments of the rest of the party by testifying to the ability and willingness with which he discharged his task.

The silk districts of Japan are confined to the principal island, and may be divided into three groups: the Northern, designated under the general name of Oshiu; the South-Western, including those of Echizen, Sodai, Mashita, &c.; and the Central (the object of our journey), which produces the Mayebashi, Shinshiu, and other varieties of hank silks, as well as the silks of Kôshiu and Hachôji.

We found the worms in general in the chrysalis state, and saw numbers of trays of cocoons baking in the sunny streets. Still, near the borders of Musashi and Jôshiu, and on the 30th of June at Kaminosuwa, in Shinshiu, we observed some late worms in the stage between the third and fourth casting of the skin. At Annaka, in Jôshiu (26th June), many were just ready to spin. At Uyeoa (28th and 29th June), and other places in Shinshiu, and in parts of Kôshiu (first days of July), the moths were beginning to emerge from the cocoons, and to lay their eggs. Reeling was going on almost everywhere.

In Musashi, Jôshiu, Shinshiu, and Sagami, is produced the greater part of the class of silk which is tied up in hanks, and sold under the name of Shinsiu and Mayebashi hanks. In Kôshiu the silk was formerly always made up in bundles; but since the decided preference shown by foreigners for the above two descriptions of hanks, much of the Kôshiu silk is made up in that form, instead of in bundles as before.

It has long been known that some regions of Japan are more favourable than others for the production of eggs. Mountainous districts, at a distance from the sea, appear to be the most propitious; and the Japanese rearers of silkworms, whom we questioned on the subject, invariably informed us that their seed came mostly from Shinshiu. None but the poorer class of peasants, as for example those in Kôshiu, rear silkworms hatched from their own eggs; so that in general the silk of the five provinces in question may be said to have a common origin, and the seed to be renewed year after year from Shinshiu. The difference in the quality manifestly results from the difference in climate and soil, and in the culture of the mulberry, the rearing of the worm, and the reeling of the silk.

Our route to Mayebashi lay through an extensive and well-cultivated plain, among the products of which are rice, both paddy and upland, grain, buck-wheat, hemp, rape, and a great variety of beans and other vegetables. We first observed the mulberry some twelve ri from Yeddo, in the neighbourhood of Konosu; and we subsequently met with it almost universally, except upon certain high levels, where the Japanese had doubtless found by experience that the cultivation of its leaf, and the rearing of the worm, were rendered too uncertain by the frequent variations in the temperature.

Near the borders of Musashi and Jôshiu, the soil became more sandy and stony, and the country is traversed by a number of streams, mostly of little depth. We crossed the broad River Tone, the largest in the Kwantô, and then visited Mayebashi and Takasaki, the head-quarters of the Jôshiu silk district. The former town is the seat of the Daimio Matsudaira Yamato no Kami, from whose retainers we experienced marked civility.

At Mayebashi we were conducted to a house where an office (Aratami Sho) has been recently established for the inspection of the silk of this Daimio's territory. We were told that there were fifteen merchants in the town, and seventeen in the country round about; that they formed a species of guild; and that they bought all the silk which was reeled in the territory. This silk, we were informed, was henceforward to be inspected at the office, where all foul hanks would be rejected,

and a distinguishing mark put upon the remainder, which would then be dispatched to Yokohama to a newly appointed Agent of the name of Hikishimaya.

After my return, when in Yokohama, I met this agent and ascertained that he had already established himself there for the purpose above mentioned.

One of the Kerai of the Daimio paid me a visit, and I took an opportunity of asking him whether he had seen the paper published last year and circulated by the Yokohama General Chamber of Commerce, embodying certain complaints made by the foreign silk merchants with respect to Japanese silk.

The Kerai answered that it was owing to his Prince having read this very document that he had established the office, and that it was hoped by this means to send better silk to the Yokohama market, and thus restore the former reputation of the Mayebashi hanks.

I impressed upon the Kerai the advantage which would accrue to the native as well as to the foreign merchants if greater pains were taken with the winding of the hanks, thereby preventing the prevalence of the foul and tangled places which at present tend to deteriorate the value of the silk, and also if all the paper ties were made of one uniform size and weight.

After visiting Takasaki we left the plain and entered a mountainous region which we did not finally quit till we approached Hachôji on the 5th of July.

As we rode up the valley to the Usui Tôge we observed a much larger quantity of the mulberry; the trees bordered many of the fields, and occupied the whole of some. They were larger than most of those which we had already seen, varying from 3 to 6 feet high, some being even considerably taller. The aspect of the country, with its sandy, stony soil, and its hilly character, reminded my French companions of that in which silkworms are reared in France.

After crossing the Usui Tôge, a high pass which divides Jôshiu from Shinshiu, we proceeded down a valley to Uyeda, one of the centres of the renowned silk district of Shinshiu. The town is situated in a large basin, which is bounded by hills of considerable height, some snowy summits appearing in the distance. The River Chikuma flows past it and falls into the Aka, one of the largest rivers in Japan, which runs into the sea at Neegata. The air in the whole of this high level was clear and bracing, and there was a healthier look about the inhabitants. Large tracts of land are devoted to the culture of the mulberry in the immediate neighbourhood of Uyeda.

In the little village of Nagase, which we passed soon after leaving Uyeda, all the silkworm cards are fabricated during the spring. The season was over for this year. Our route to Kôfu, the capital of Kôshiu, was by rough, stony roads, across the Wada Tôge to Kaminosuwa, where we received much attention from the retainers of Suwa Inaba no Kami, the Daimio of Takashima. Thence we continued through poorly-cultivated valleys, which abounded in huge boulders, and where the broad, rocky beds of the streams, and strong stone breakwaters running out from the banks, testified to the violence of the torrents in rainy seasons.

Kôfu, the centre of the Kôshiu silk district, is situated in a large plain, surrounded by mountains. It is a town of some extent, and possesses one of the castles lately belonging to the Shôgun, but now held in trust for the Mikado by the Daimio Akidzuke Ukiô no Ske, President of the House of Representatives sitting in Yeddo. The plain is full of paddy; and when we were leaving it, and began to ascend again, we came upon a quantity of vines, trained on horizontal trellis frames, which rested on poles at a height of 7 or 8 feet from the ground. Crystals are found in some of the surrounding hills.

The quality of Kôshiu silk has been found to vary considerably in different years, and even that of a single year is often of several qualities. The cause of this is manifestly to be sought in the climate. Mist covered the tops of the mountains during all the time we spent in this province; a contrast to the clear weather we had enjoyed in Shinshiu. Such a misty atmosphere in April and May, combined with the sudden returns of cold so common in this country, cannot but be prejudicial both to the culture of the mulberry, and the rearing of the worm. The cocoons which we examined in Kôshiu were often of an inferior description; the villages are poorer, and the inhabitants have a less healthy appearance than those of the more favoured Shinshiu.

We continued our journey through hilly country, and over two passes, till on 5th July, we dropped down into the plain, and arrived at the well-known town of Hachôji, within the Treaty limits.

On the 6th July I returned to Yeddo, and my companions to Yokohama.

Report by Mr. Adams, Secretary to Her Majesty's Legation
in Japan, on the Central Silk Districts of Japan.

Sir H. Parkes to the Earl of Clarendon.—(Received October 3.)

My Lord,

Yokohama, August 9, 1869.

I LATELY reported that Mr. Adams, accompanied by Mr. Wilkinson, and three members of the foreign community, had visited certain of the principal silk districts for the purpose of acquiring information as to the culture of the silkworm and the prospects of the silk season which is just commencing.

The success of this expedition is proved by the inclosed valuable Report which has been drawn up by Mr. Adams, and which I have the honour of laying before your Lordship.

In view of the local importance attaching to the subject, and the great desire evinced by the merchants here to profit by the information which has thus been gained, I trust your Lordship will approve the determination I have taken to communicate this Report to the Chamber of Commerce at Yokohama, without waiting for its publication in England.

I have, &c.
(Signed) HARRY S. PARKES.

Inclosure 1.

Report upon the Central Silk Districts of Japan.

Yeddo, August 7, 1869.

I LEFT Yeddo on the 22nd of June, 1869, accompanied by Messrs. Davison, Piquet, and Brunat, silk inspectors belonging to three different firms in Yokohama, and by Mr. Wilkinson, of this Legation, as interpreter.

We travelled on horseback, and, as has been usual in the expeditions into the interior of Japan, which have been taken from time to time of late years by members of the Diplomatic Body, we were attended by a mounted escort, consisting of ten yakunins, supplied by the Government. One or two of their number started before us in the morning, and gave warning of our approach to the officials of each post town in the day's route. Much trouble was thus avoided with respect to the transport of our baggage and provisions, and on reaching our resting-place for the night we found the officials and the keepers of the "honjin," or hotels, prepared to receive us.

On the road we met with great civility, both from the retainers of Daimios through whose territories we passed, and from the yakunins of the post-towns and villages. Our escort were also uniformly attentive to our wants, and the Government had even inserted in the "Official Gazette" a formal notice of our intended journey.

In order to show our route more clearly, I annex to this Report a tracing of a Japanese map. The original map, though not strictly accurate, is sufficiently so for

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B 2

JAPAN. No. 1 (1870).

REPORT

BY

MR. ADAMS,

SECRETARY TO HER MAJESTY'S LEGATION IN JAPAN,

ON THE

CENTRAL SILK DISTRICTS

OF

JAPAN.

Presented to both Houses of Parliament by Command of Her Majesty.
1870.

LONDON:

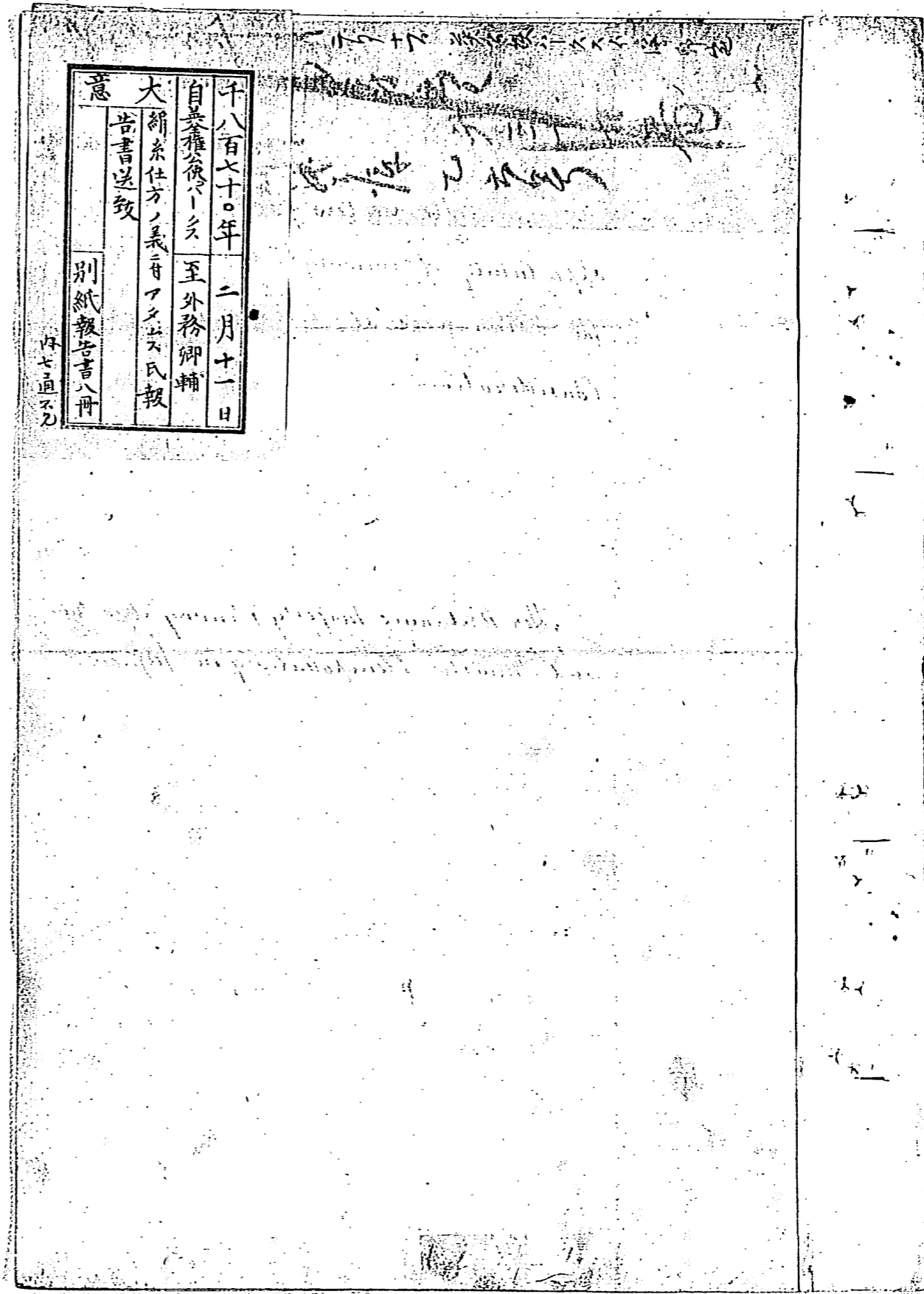
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千八百七十年 二月十一日
自英權後ハニ至外務卿輔
大納系仕方ノ義旨アズル氏報
告書送致
意

別紙報告書八冊
内七通云々

taken in the preparation of the silk.
It also draws attention to the serious
injury occasioned by the "mji" worm
and the manner in which this should
be checked.

The undersigned has heard with
satisfaction of the interest taken by
Your Excellencies and His Excellency the
Minister of the Interior in this subject
when Mr Adams visited them on the
7th Inst ant by direction of the undersigned
and he trusts that the Japanese Government
will approve of the information contained
in these Reports being communicated
to the silk growers in such form as
the government may deem advisable.

The

The undersigned takes this
opportunity of renewing to their Excellencies
the assurances of his distinguished
Consideration.

Harry Parker

Her Britannic Majesty's Envoy Extraordinary
and Minister Plenipotentiary in Japan.

Yokohama

February 11, 1870

The undersigned has the honor

2: / to forward to Their Excellencies two
 6: / copies of a first Report and six
 copies of a second Report by Mr.
 Adams Secretary to Her Britannic
 Majesty's Legation on the Silk
 Culture of Japan. The second
 Report points out the causes of the
 inferiority recently observed in the
 quality of the Japanese silk and
 shows that in order to check this
 deterioration greater care should be

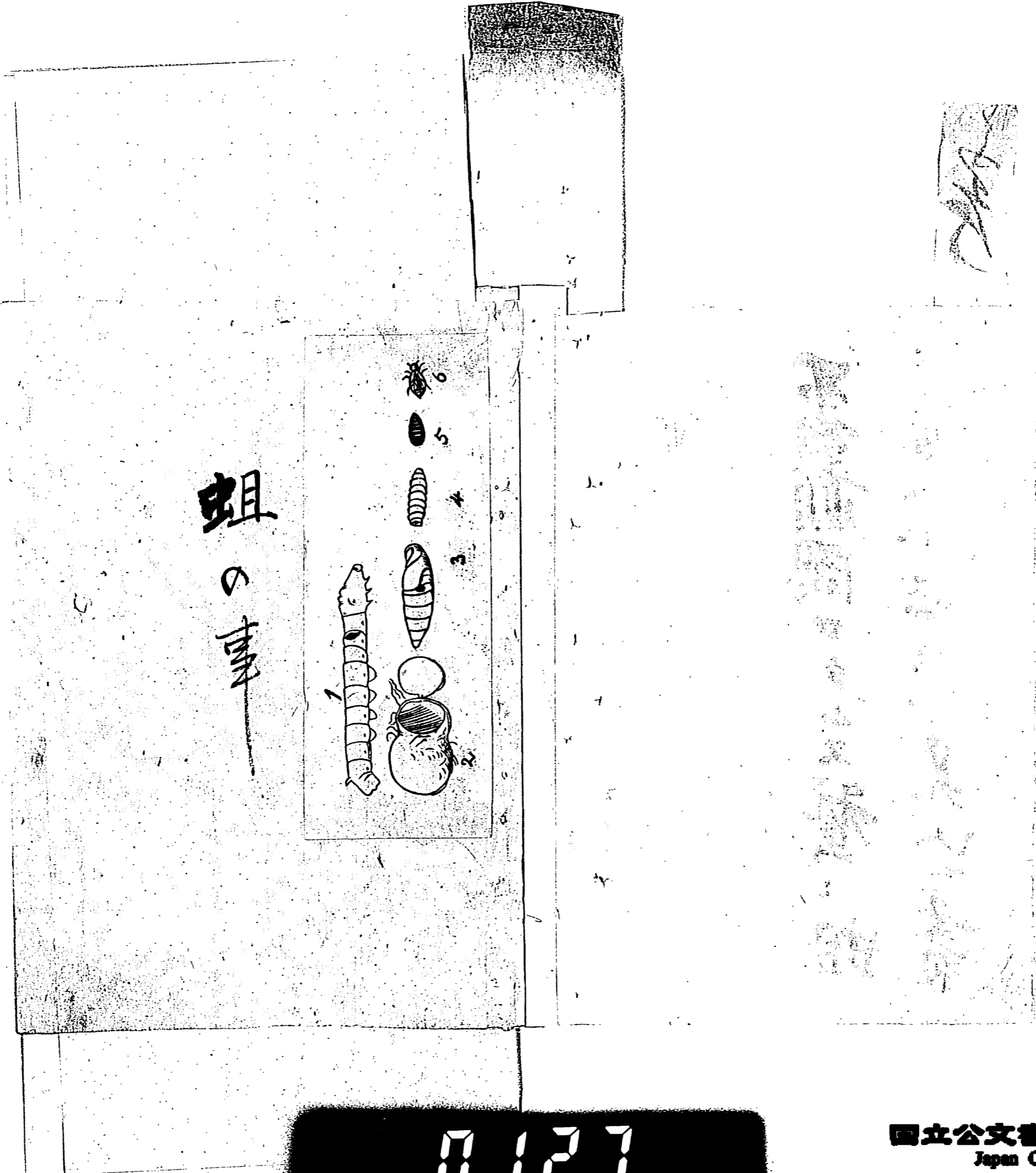
To taken

Their Excellencies
 The Japanese Ministers for
 Foreign Affairs

子

不列顛國アタムス登：虫
ヲ生スル云々ノ見ハ書

七十一



3-1308

0127

蝦のあつは獲れんし三度午後
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ふふふふふふふふふふ

第二 蘭船の形

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在り所。海下の星

第四 七人乗りの内より其の海をのびし
四舟のちちちち

第五 國より星を射する船と
ふふふふふふふふふふ

第六圖の如く生れの帳のめまはしり成
 ありて帳のついで生れりやまは
 きたりたりしるる多分生れり
 ありしるる世に世の生れり
 偶々或は世の生れり
 此帳の父の生れり

の二番の卵程と生れり
 死しきたりたけり
 あり尤も爾るは担り
 此世の生れり
 ありしるる世の生れり
 此中、卵程と生れり

0130

3-1308

國と油を以て欲するは伊と喫
ては其の年々一と過るに春の腹
中へ爲るべきを、**日平人**とあり
心は遠くは相に推量するに其言
中へ其言ると心は教をいへる所
接しぬ又其言とあり、**能く**とあり

有る害を存し、**しつ**省は相
しつとあり、**出**り身は推量す
ちを殺し、**と**と末年、**しつ**
能くの言は減し、**は**病をなす、**しつ**
しつは言はる、**黒**言の何、**春**とあり
お、**石**分け、**黒**言の何、**春**の

0131

甲午の事、
系に改りて、
以て件、
以て是、
想を、
吾を、

害と、
生、
相、
の、
爾、
あ、

0132

3-1308

生糸と蚕糸

西洋の器械

事

可憐の修飾の度

竹器の修飾

全目的の修飾

可憐の修飾の度

竹器の修飾

全目的の修飾

可憐の修飾の度

竹器の修飾

全目的の修飾

0133

糸の虫しるすも御水書
城をたむる者次羅巴の
器城を日平月とあるは
うまふも高野村人の糸の
善悪のつる係ははる品数
と多くははるの國人の意

利益は本より心は糸の虫と
一向に様をへる糸の虫
高野の糸の虫は糸の虫
糸の虫は糸の虫は糸の虫
糸の虫は糸の虫は糸の虫
糸の虫は糸の虫は糸の虫

0134

右は昔の所尚主女史の御考
以し如書載と口布に傳は
極き所は其の傳公如書載也
亦く其の考は仍も去外國人と
之傳は其の考より伝年一
中ニ一人の傳者一考なり在

右は昔の所尚主女史の御考
以し如書載と口布に傳は
極き所は其の傳公如書載也
亦く其の考は仍も去外國人と
之傳は其の考より伝年一
中ニ一人の傳者一考なり在

0135

3-1308

西遊記 四卷 五十一回 世に伝ふる 民部 奉
四

二冊 予 念 心 分

ムス 止 後 互 じ 登

旦 民 部 乃 漫 明

廿 台 才 二 子 於

少 有 ア ダ ム ス 入 彦 按

陸 乃 希 一 ボ ル ト 台

河 乃 通 年 子 於

以 中 乃 通 年 子 於

以 通 年 子 於

乃 乃 乃 乃

民 部 奉

皇朝文獻通考卷之...

皇朝文獻通考卷之...

皇朝文獻通考卷之...

皇朝文獻通考卷之...

皇朝文獻通考卷之...

皇朝文獻通考卷之...

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皇朝文獻通考卷之...

皇朝文獻通考卷之...

皇朝文獻通考卷之...

皇朝文獻通考

皇朝文獻通考

3-1308

0138

谷麻生

牙征記抄録共

二冊

ハス、江後

且及

廿

也

アダムス

ア

中

外務省

外務省

民部省

外務省

世

痛
位
所
指
附
主

左原

此書は市先東条法流抄録也
二冊ありしアタムスノ原也
一冊は長江後明也
二冊は右抄アタムスニ付録也

アノ一ボルト本曰ク本内記
此書は長江後明也

アノ一ボルト本曰ク本内記

外務省

北之

表發試驗法布告書五百冊
予進中使英國公使館
方有之發也

二月廿三日 民部省

外務省

榮

大民
藏部
省

校了

庚
三月廿日

民部省 新甲

外務省

各省試験に事生五五部地之系
及古館合也

年三月廿日

第六號



外
以
奉
陸
陸
陸
陸
陸

養發試驗少布告書昨口五百部	口知ヤク等終五百部」以廻中」	在名初千部」以廻中」後」	勸講」以」吳公使」	多取」用」	先五部」	入用」	可」	大民 藏省	加」	及」	二月	外
---------------	----------------	--------------	-----------	-------	------	-----	----	----------	----	----	----	---

廿四

多可月日民ア以外務ノ

出願 於外務省アタムスニ 應接 按云

有る姓在日其向りて私書及布告先此

多一 其情云々 之儀有之

出云々 認加云々 之儀

於之月日ニ政府ヨリ布告有之

其指し示す事ニ及之 取方云々

外務省

英商人ヨリ云々 英商人ヨリ

五種 按之 之 人云々 之 旨

且按 按之 之 商人云々 國商人

按之 之 之 事 情 按之 之 旨

按之 之 旨 之 旨 之 旨

之 旨 之 旨 之 旨 之 旨

之 旨 之 旨 之 旨 之 旨

寫清

北

御
大輔

大輔
權左衛門
藤原

大輔
藤原
生

昨。山内。一。年。長。程。減。後。子。は。中。外。
言。法。之。後。之。事。は。之。比。ア。ム。久。り。久。き。
後。之。事。は。之。比。ア。ム。久。り。久。き。一。應。及。
は。無。事。ナ。リ。ト。申。上。

長。安。ノ。海。路。之。年。為。十。二。月。ニ。申。上。

外務省

今。年。之。事。は。昔。年。ノ。事。ト。同。シ。ク。申。上。
日本。之。事。は。昔。年。ノ。事。ト。同。シ。ク。申。上。
日本。之。事。は。昔。年。ノ。事。ト。同。シ。ク。申。上。
日本。之。事。は。昔。年。ノ。事。ト。同。シ。ク。申。上。
日本。之。事。は。昔。年。ノ。事。ト。同。シ。ク。申。上。
日本。之。事。は。昔。年。ノ。事。ト。同。シ。ク。申。上。
日本。之。事。は。昔。年。ノ。事。ト。同。シ。ク。申。上。
日本。之。事。は。昔。年。ノ。事。ト。同。シ。ク。申。上。
日本。之。事。は。昔。年。ノ。事。ト。同。シ。ク。申。上。
日本。之。事。は。昔。年。ノ。事。ト。同。シ。ク。申。上。

御
大輔
權左衛門
藤原

リノ右ノシハ由及ク我カキル事ニ由ル
事ニ至ラズヤ

子ノ由

外務省

民部省
印

外務省

傳之合ふ一紙後
民部卿
假名
其
且
傳
之
合
ふ
一
紙
後

平假名... 布告... 尤美人... 不都合... 一人... 再答... 月... 民部省

此種試驗... 告

此種... 告

右... 告

此... 告

此... 告

此... 告

外務省

寫濟

世女

海島

外郎

町大邑

大福

各

左補

抄り也

光

任是申少公未致家試給印告
し申少公未致家試給印告
見合漏しと云在印

二月十日

民部省

外務省

外務省

此原存神
戸雜居地及
山手地所地
租改正一件
中三ノ



庚午五月二日於外務省海防事務卿古島
外務大臣大隈大將大輔 伊藤大將少輔 兵
庫縣海防事務 英國公使サー・ハリー・パークス
ト 懇接礼

一 查此產田見為... 夫人...
也 困意以下部

第拾三號

相部... 是道順... 是...
... 是... 是...
... 是... 是...

一 在... 給... 面... 是...
... 是... 是...
... 是... 是...

三台新編

無濟

引金濟

外取

大取

大取

大取

大取

大取

大取

此は紙張の取上り物に由りて別
多に紙張の取上り物に由りて別
之を以て紙張の取上り物に由りて別
之を以て紙張の取上り物に由りて別
之を以て紙張の取上り物に由りて別

外務省

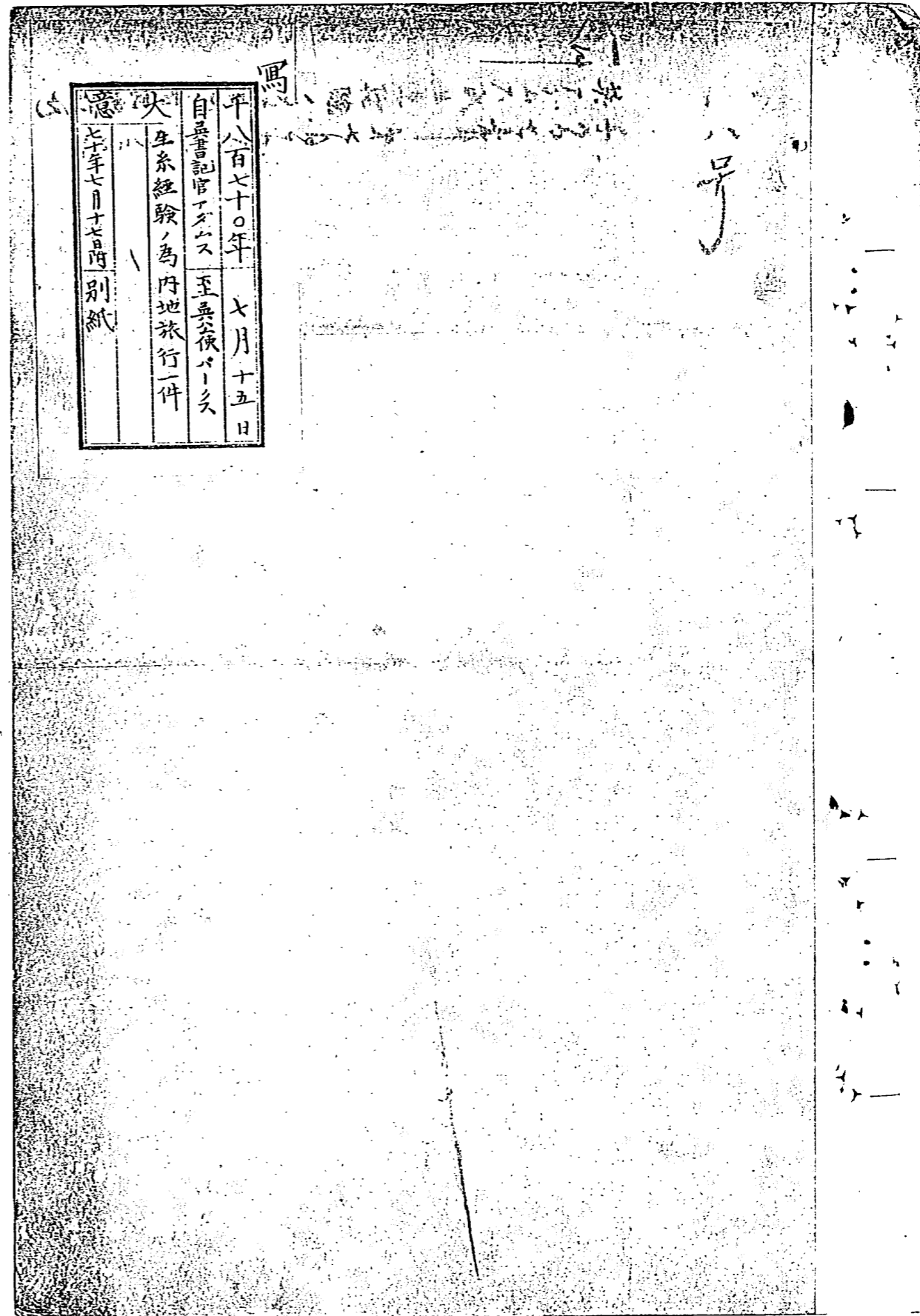
外務省

年月日

三月三十一日

外務大臣

署名



3-1308

0157

their efforts to make our long journey as
free from trouble as possible, and
I should be glad if you would
particularly mention to the Govt
the services of the headman
Murata Nishiro, who has
now accompanied me two years
in excursion to the silk
districts and whose careful
arrangements smoothed every
difficulty and enabled us
to travel with ease and
comfort.

J. R. Adams

(Signed) J. O. Adams

The Chikuzumi of Suway

sent the same Kerai as he did last
year to meet me at Shimonosawa
and the Chikuzumi of Uyeda
dispatched several officers to await
our arrival at the top of the
Gofukuzumi pass.

I am sure, Sir, that you will only
be too happy to bring to the notice
of the Mikado's government these
signal acts of courtesy towards
foreigners travelling in the interior
of Japan.

It remains for me to say
that the seven Bette who formed
our Escort were untiring in
their

Chikuzumi of Masebashi waiting for us, having been specially sent over according to orders from the Court to welcome me, and to show me any civility in their power, whilst I traversed a tract of country belonging to that Han. Proceeding on our way to Shimonita, we passed through the village of Yoshin, where a guard of soldiers of the Chikuzumi of Obata were drawn up and saluted us. a little further on we crossed the river Kamuro and
there

there we found a guard of soldiers belonging to the Chikuzumi of Namka-ichi and were escorted by them to Tomooka.

Besides the above I must particularly mention the Inaka Kew. Their officers greeted me when we reached the Province of Shinshu from Shinonita, they showed me the same civility at Shiwojiri, and one officer accompanied us from there to the high top of Hofu Kuzi which leads from Matsumoto to Myada. Again at Nojiri, on the confines of Echigo, officers from the same Kew were in attendance
The

Copy

Yedo

July 13. 1870

Sir

It is my pleasing duty, after a lengthened tour in several of the principal silk districts of Japan, to report to you, as I did after my journey of last year, the marked civility which I have experienced from officers in the different Provinces through which I travelled with my party.

When we arrived at Matuyama in Musashi, on the second day of our journey we found officers of the

Sir Harry S. Parkes K.C.B. Chikuzen

千八百七十年七月十七日
自英全權公使^澤至^{青島}
大^ア名^カ氏^ノ絹^カ糸^ノ生^テ産^ス所^ヲ遊^ビ曆^シ申^シ諸^ノ
藩^ノ言^ハ懇^ニ切^ニ取^リ扱^フ謝^意詞^ヲ
別紙^ト送^ル通^ス見

三十一号

particularly mentions the
services of Murata Nhabiro
the head of his escort of
Betli.

It affords the undersigned
much pleasure to bring these
courtesies and services, particulars
of which are given in Mr.
Adams report, to the notice
of the government of His
Majesty the Tenno.

The

The Undersigned avails himself
of this opportunity to renew to
Their Excellencies the assurance
of his most distinguished
Consideration.

Aug. Paibes.

H. B. Mr. Inuy Extraordinary
and Minister Plenipotentiary
in Japan.

British Legation Yokohama
July 17. 1870

The Undersigned has the
satisfaction of forwarding to Their
Excellencies a copy of a report in
which Mr. Adams who has just
returned from his Expedition to
the Silk Districts, acknowledges
the attentions he received while
on his journey, from the
Chikanjis of Matsubashi, Obata,
Nanaka ichi Suwa and
Nyeda, and from the
Chitenge of Inaka. He also

To Their Excellencies particularly

Sawa Gaimunko
Furashima Gaimutaiyon
" " " "

Vertical text on the right side of the page, possibly a date or reference number.

Vertical text on the left side of the page, including a date and a name.

絹絲産出の調子

廻り糸の調子

糸方の調子

前橋小幡七日市

上田の知事

知事事務格別入念

取扱有るに起

此外アタムス



絹絲産出之國に在

廻り民功以別減き通

私方は其出買了之故は

前橋小幡七日市旅行

上田之知事満事兼伊那

知縣事、格別入念

取扱有之趣、清江屋

此外アタムス、附添紙枚

翻訳文

以手紙致啓上ハ然テ

我公使彼書記官アタムス

絹絲産出ノ國ニ相

廻ル此功以別試考通

私方ハ此書留了致以

前橋小幡七日市紙行

上田ノ知事諸事兼譯那

知縣事、格別入念

紙扱有以起、清

廻り此物迄前試き通

私方此迄出所了致候

前橋小幡七日市旅行

上田之知事満事兼伊那

知縣事、格別入念

私扱有之趣、清之

其外アタムス、附添此致

別子組、以村田守八郎

別段骨打お勤候中

如林丁寧、次第に於候

極々大昔、候、此處

委細、紙アタムス書

管中、認有、右様

別子組、以村田守八郎女

別段骨打お勤の旨申上

如林丁寧、次第に於知

極々大業、候に於て

委細、お紙アツムス書

管中、認有、古紙抄録

天王陛下政府、申上

如所、以存候、以上

六月廿日、ハリスミスハ、久

沢、從、法、原、宣、承

寺、為、從、法、原、宣、承

閣下

以上

六月廿日

ルリー君ハリス

澤 浪三任清原宣宗

寺宮 後四任清原宗男 関下

外務省

外務省印

別紙

寫濟

加

加福

勸方

大書

勸方
勸方
勸方

寫

以少紙致厚上之紙也。昨年拙者旅行
一諸諸地其地一官員の可嘆の事接
待を受け其趣を既、報告致置る事有
之。又此致も日牛生系出産一州野久一
旅行日帰者致も日牛根及一趣致録

外務省

昔年

拙者も各禮儀二日目の武蔵赤松山に
着致る事後前橋迄之儀あり。拙者一
斗者も致る一拙者、對一精之恭禮也
一均旨を余一別匠士官也出。一拙者
也相迎一申あり且拙者も右回馬官轄内
一地を巡廻致る事及シモ一ツ一方一系
途中吉井村を通行致る事知属

奉り出せり一隊の兵卒其村に並列し
松者亦一為に祝砲し禮を申し申す其地
を去り事僅し一カ台川を渡り以て
七日市し知藩事一属し一隊の番兵
有りて松者を留固進を護送致し其
殊に松者をシモタリ信州に針り
時伊那縣に官員等甚く禮を取扱ひ
塩尻に下着致す其も日孫恭禮を以

ひき入る官員を出して松本へ上田迄引
越た途中アフクジし峠迄同伴を致し
中へ又越後境野尻とて同縣に官員
大に周旋致し其申す
諏訪し知藩事も昨年下澤へ
拙者、待遇せし向家来を送り上田へ
知藩事し拙者を迎らんアフクジの
峠迄数人の官員を出し途中を就

外務省

祝物半々
 一宮持礼
 一宮持礼
 一宮持礼

華より出せる一隊の兵
 拙者亦一為之祝砲し禮
 を去八事僅に
 七日市し知藩事
 一宮持礼
 殊に拙者
 時伊那縣
 塩尻
 以き人
 一宮持礼
 中
 大
 諏訪
 拙者
 知藩事
 峠上教人

0174

3-1308

外人し日本内地を旅行せり者日右し
如く各地方より丁寧なる取扱ありしを
日本政府より報しとる者右者閣下に
於て亦より西に之し存る者外
此者附屬の行政の保護送し別組
六人し之も各地方に之し此者其之類り
旅行の行政の多しとる日別に組以て相
定むる者二年生東京出産し地方に

外務省

此者行政の諸事詳細に注意致
是を以て行政の面にも注意し
客務の旅行の多しとる日別に
其趣政府への報知しとる存る

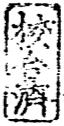
大正七年

七月十五日東京

エフ、オ、アタカス

オア、シリ、エス、パークス、ケ、シ、ビ、

(別紙)



比書詞案

別子銀肝羹

村田守八郎

英人アダムス儀は種上別位少巡歴
中々方附係而斗向多端以居る
照回公使より挨拶有るを以て

中々方附係を以て一紙を事す

痛切

濟

三日月

六月廿七日

位

前橋の借七の市 諸君上回へて
伊那郡

一書初案
英國公使館附第一等書記官
此程中 諸君上回へて

厚初御多々 敬之 外國へ
後、上御出給ひ

外務省

一殿了り止 依之 中
教務 方り

元々二月 外務省

伊那郡

位



日付
○

七日

伊那

市 諸君上回

第一等書記

外務省

外務省

外務省

外務省

外務省

外務省

伊那の
諸君の
御返事
を
承り
申上
す

庚子八月三日

校合済

一 英國公使より書す

此原春小品物
贈答二件ニ入ル

以手紙被得し之礼に事以解し之儀に身
由公使附附書一筆書記少及アタムス氏
著述以毎一冊才之号より手紙ニ被
圖下点及之等此内書被得

第拾五册

米之國

天皇陛下政府より書及出有之度被得
右之類可為御意如所申す如し

八月十日

大親利右大臣

全權公使

ハルリーパークス

海峽通信社東京支社

閣下

十一

寫濟

此原合品物贈
答一件ニ入ル

以手紙致厚之致と答答之義ニ片
ヲタカス氏著述ニ手紙ニ進ニ紙紙
我々何々々々々々々々々々々々々々々々
丹々々々々々々々々々々々々々々々々々
外務省

英三保鑑
アストン
外務大臣御書下

英



庚午八月十日

校合濟 一 英國公使より返答

此原各品物贈
答一件ニ入ル

我八月十日、附由書の原由を述べ申上
拜々儀、アダムス氏著述を致し、
号の冊子に綴り、
政府より出可申上、
不才儀、アダムス氏之著述を感謝致し

第拾冊

百箇下より同氏より附由書多下
度、
以信三
洋 外務卿

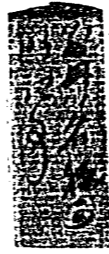
英國公使

サアハルリー・バクス

閣下

百十





馬濟

<p>丁卯年 五月 二十七日</p>	<p>外務省</p>	<p>外務省</p>	<p>外務省</p>	<p>外務省</p>	<p>外務省</p>	<p>外務省</p>	<p>外務省</p>	<p>外務省</p>	<p>外務省</p>	<p>外務省</p>	<p>外務省</p>	<p>外務省</p>	<p>外務省</p>	<p>外務省</p>	<p>外務省</p>	<p>外務省</p>	<p>外務省</p>
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英

英領事館

大蔵省

外務省

名

	<p>英領事館より大蔵省へ送る。英領事館滞留中</p>	<p>英領事館より外務省へ送る。英領事館滞留中</p>	<p>英領事館より大蔵省へ送る。英領事館滞留中</p>	<p>英領事館より外務省へ送る。英領事館滞留中</p>	<p>英領事館より大蔵省へ送る。英領事館滞留中</p>	<p>英領事館より外務省へ送る。英領事館滞留中</p>	<p>英領事館より大蔵省へ送る。英領事館滞留中</p>	<p>英領事館より外務省へ送る。英領事館滞留中</p>
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外務省

英領事館

英領事館より大蔵省へ送る。英領事館滞留中

七〇六

<p>神奈川に留英國領事了過日</p>	<p>表食蚕本場巡視了日 我朝本書</p>	<p>口國公使の差出せる書本書終</p>	<p>寫すの口廻り中紙を以て海軍省に</p>	<p>送るに當省より翻譯出来たるもの</p>	<p>人少なるを以て兼て省に於て翻譯</p>	<p>了上西の一日に於て終了する事</p>	<p>大藏省</p>	<p>お添及の事</p>	<p>大藏省</p>	<p>外務省</p>	<p>四</p>
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事ノ一ツノ事

大蔵省 外務省

等

英吉利ノ事ハ其ノ法以テ其ノ國境ニ於テ其ノ事
其ノ事ハ其ノ國境ニ於テ其ノ事
少シク其ノ事ハ其ノ國境ニ於テ其ノ事
其ノ事ハ其ノ國境ニ於テ其ノ事
大蔵省ノ事ハ其ノ國境ニ於テ其ノ事
外務省ノ事ハ其ノ國境ニ於テ其ノ事
其ノ事ハ其ノ國境ニ於テ其ノ事
其ノ事ハ其ノ國境ニ於テ其ノ事

外務省

事ノ一ツノ事

三百二十四番

二章三日丁未

寫濟

卯

儀書

公書保

此原書外國人
内地旅行一件
入

以我政府之我以此次接濟新等中致
 出極便利公使布告極之日為人民者
 用向之貴國因受之立我及保許密者
 無信函致他之君不以此為道我之與
 國之間之商務條約第二十三條向後他之外
 國之不可許條約也時之競利太尼亞國臣也
 外務省
 因物之件可方之極揚我者之有前也
 我之立我及我人民之有前也同物許密者
 之有布告致及有向之知知有之也仰
 我之有前也之許密我得之我人民之儀何
 太里公使同物拙者之有引之不可申候者
 極可保其意也以此也以上
 六月十二日
 英西外務大臣
 阿道夫・波特
 一別島外務大臣
 波特

寫濟

新設中神本知事

日本伊太利領事館

今般高原諸伊太利全權公使コントゲト
フカニ氏より以來伊太利商人之内證印
紙取封之者ハ直ニ其元産地ニ宛リハ
不若越中廻ニ有沙版布若おハ
結ハ右理之者ハ日本政府より途中
往來切手と取渡さる事ニ至ラズ

外務省

之者之當教ハ可然ハ尤切中
ニ有秀細之過程を記ハ事ニ至
也

三月七十二年四月二十九日 横濱伊太利

領事館ニ於テ 副領事ブリヨニ

此章自外國人
内地旅行一件
ニ入ル

第九節

申六月十五日

一 英國の使と運輸

貴國七月十七日附書尙多被披見々物々保有利
必人民之去用向を我國内所へ之裁と云々政府
おろく許容一類同必之使より市者か
主國人民も口市告に成る保太利國日如許可
方一各古被了兼い古義二同國內運来生糸蚕卵
等々當石の屑并其節取扱之若本國より美裁
亦國內養蚕場を以て取扱方の研究を促
同必外務掛ミニストルよりト裁に裁りて之を以て

外務省

限り許可を以て古懸領に甘養蚕を以て尋常
高用を以て違ひ農政を急務を以て兩國懸親の
意と表し一附の物典を以て許容を以て令へ古
市者ハ事實を以て懸諾被不致合并亦付同必之使
掛合中一カレに就ては古保一懸意に推察す
保太利必迄のく人民ノ内國各所通過等々
保の了解を以て古保各可得の意如斯く以上
明治五年申六月十五日 外務卿副島種臣
大慈利太泥亞代理之使
アービーワトサン 閣下

