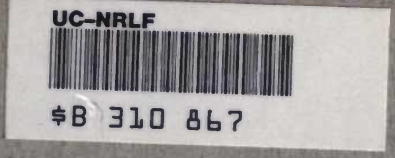


TASMANIA.

Walter W. Bradley.

A REVIEW

OF THE

Osmiridium Mining Industry of Tasmania

BY

CAMPBELL BROWN, M.A., B.Sc. (Edin.), PHD.

Photographs by the Author

Tasmania:
JOHN VAIL, GOVERNMENT PRINTER
1919

TASMANIA

A REVIEW

OF THE

Osmiridium Mining Industry of Tasmania

BY

CAMPBELL BROWN, M.A., B.Sc. (Edin.), PHD.

Photographs by the Author

Tasmania:

JOHN VAIL, GOVERNMENT PRINTER

1919

CONTENTS

A Review of the Osmiridium Mining Industry of Tasmania

By Campbell Brown, M.A., B.Sc. (Edin.), PhD.

1.—*Retrospect.*

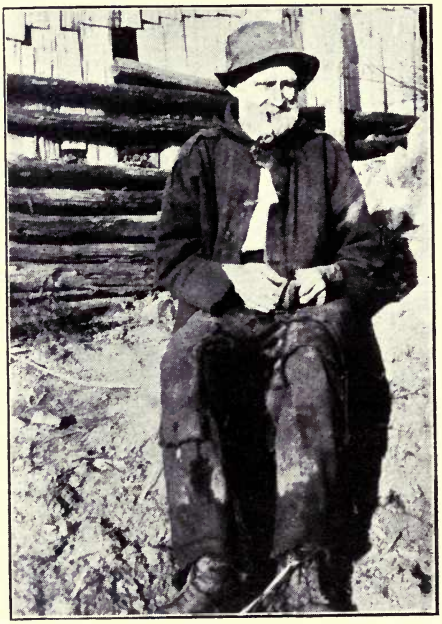
As far back as the year 1804, a British scientist first announced the existence of the two metallic substances known as Iridium and Osmium; and exactly one year later, another discovered that the two substances were habitually found combined together in a rare metal usually associated with Platinum, and he named the new metal Iridosmine. By this latter name the metal in question is universally known in scientific circles to-day; though its somewhat uncouth and misleading synonym "osmiridium" persists in mining communities everywhere. The Tasmanian miner calls Iridosmine "osie," in his familiar way of expressing himself, and "osie" it is likely to remain.

The Russians at first looked on it as a hard variety of Platinum, which it resembles somewhat closely, and it was only after a considerable amount of investigation that the new metal betrayed distinctive features of its own that Platinum itself did not have. Some of these very features attracted commercial attention in the process of time, and gradually the metal obtained an independent market apart altogether from platinum.

In the early days Tasmanian prospectors operating in the North-West struck a rich belt of country yielding a variety of mineral substances of more or less commercial importance. The prospector after gold, in penetrating the bush, found in "panning off" an unknown metal with a tin-white colour, which annoyed him very much, and which obviously had a greater specific gravity than gold itself. In certain localities this metal

was so abundant and persistent that steps were taken finally to have it scientifically identified, and to ascertain its commercial importance. It was soon recognised as Osmiridium, and the problem then arose to secure a market for it.

There is living to-day on the osmiridium fields in Tasmania one of these old pioneers, by name James McGinty, who found the metal as described, and whose first efforts to sell it were



James McGinty, the Veteran Pioneer Osmiridium Miner.

quite abortive. Latterly he started off by obtaining 25s. an ounce Troy for it, while many a gold miner associated with him threw the useless, irritating metal away, altogether oblivious of what the future had in store for him.

Once a market was discovered, the miners systematically preserved the metal, and as soon as Tasmania became a recognised locality, buyers entered into competition to secure it in a small way. In consequence, output went up, and an encouraging price was obtained, and the industry then took firm root.

It was not till 1910 that the State of Tasmania officially took notice of osmiridium among its Mineral Resources, and then efforts were made to ascertain output and values by the Department of Mines. These have been carefully placed on record ever since, thus enabling the State to enter the world's market, and attract attention to its new and promising source of mineral wealth. Prior to 1910 detailed information about the rare metal was lacking, and no particular interest was therefore taken in it. It was known that small parcels went somehow to London or New York or somewhere else, but what it was used for, or what became of it, very few knew and less cared.

2.—*Tasmania's Output.*

The Department of Mines in 1910 ascertained that 120 ozs. had been produced, and by its encouragement and assistance the output in 1911 was more than doubled, viz., 271 ozs. The next year showed even a more striking increase, the figure rising to 778 ozs., paving the way to the phenomenal year of 1913, when the figure reached was 1261 ozs. This figure would have been far surpassed in 1914 if the war had not broken out, and actually stood at 1018 ozs. in spite of the check the industry received. Under the influence of war conditions, for the next three years the figures dropped. right down to 247, 222, and 332 ozs. respectively.

As osmiridium was a precious metal requisite for munitions of war, manufacturers who used the metal found some of their usual sources of supply cut off, and then turned their attention to Tasmania. This resulted in keen buying in 1918, which sent up the output to its maximum figure of 1606 ozs. With the close of the war the rush collapsed, and the figures for the first quarter of this year show only 209 ozs. Right up to the outbreak of war the development of the industry had been most gratifying, but received a severe set-back for three years thereafter on account of diminished markets. The prolongation of the war made buyers nervous, and produced a rush such as is unlikely ever to occur again. Stability is, however, now setting in, and production will doubtless soon settle down to its normal limit, by the force of circumstances.

3.—*Location of Mines.*

The precious metal is found in various districts in the West, all of them more or less remote, and somewhat distant from each other, yet bound together by a common invariable feature, viz., the occurrence in the neighbourhood of great masses of a rock named by petrologists serpentine—a name acquired on account of its mottled appearance. It is in the creeks and river beds, and on the hillsides and even on the plateau itself, of such serpentine country, that the miner gets his osmiridium.

Quarrying Solid Serpentine Rock for Osmiridium, Bald Hill.

The best known locality is perhaps the Savage River, which has been sporadically worked for about 16 miles below its confluence with its tributary, called the Nineteen-Mile Creek, which drains part of the Bald Hill area.

This latter creek has numerous little tributaries, all famous for metal, and taking off the drainage from the western side of the Bald Hill, and are, or have been, busy scenes of alluvial mining activity. Right on the brow of the Bald Hill itself, facing the Nineteen-Mile Creek, there occurs an osmiridium mine which is quite unique. Here a well-known miner has been quarrying solid serpentine rock for over six years, and by crushing it obtaining a very high-grade class of metal. He

is the first and only miner in the world to find the precious metal actually occurring in the solid rock.

The above-mentioned Nineteen-Mile Creek, with its tributaries, is undoubtedly the best and most abundant locality for the metal in Tasmania. It has yielded far more, and a far higher grade metal, than any place yet discovered in the State, and even at its top end many a rich nugget has been unearthed.

A Working Party at Mt. Stewart.

Just a few miles distant from here, over a saddle and situated in another watershed, lies Jones Creek, a locality recently opened up and not yet fully developed. First-class metal is being found here, and this field is rapidly coming into importance, though yet small, but promising.

Leaving this area altogether, one naturally proceeds to Mt. Stewart, which lies some distance away in a region none too easy to get at. A little over one year ago, when the metal was discovered here in attractive quantities, a great "rush" took

place. The result was that all the clear ground soon became worked out, and alluvial miners are only to be found at the present moment either right at the top or further down in the Castra Valley below. Interesting developments are, however, expected in the near future in this area.

Practically within sight of Mt. Stewart, yet in the inaccessible distance, lie the Wilson River osmiridium fields. The miner's theory, both at Mt. Stewart and Wilson River, is that the same mass of serpentine persists as a belt from point to point, uniting both fields; but impenetrable bush at present separates the two, and no man can say what the future may disclose. Meantime the visitor to Mt. Stewart has to go many a long mile before he can get at the Wilson River fields from here. At the latter the miners are mostly working for the metal in small creeks or in very shallow ground or in loam or in mud itself, while further down some are obtaining the metal from cemented bottoms. The origin of some of the alluvial deposits in this neighbourhood is distinctly puzzling, and some would seem to be accounted for by transportation from a distance, probably by glacial agency.

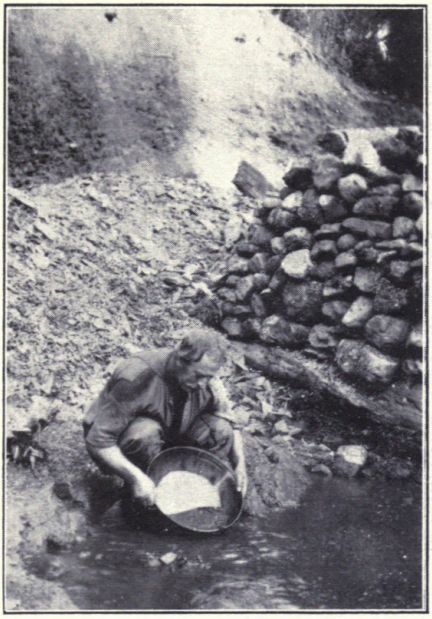
4.—*Seasonal Nature of Mining.*

In the valley of the Savage River alluvial mining, in the bed itself, can only be done to any extent in summer time, when the water is low. As the river rises in winter with each rainfall, work becomes very trying and dangerous, and in many places quite impossible, which causes the miners to suspend operations entirely, and usually to go somewhere else. On the Wilson River the position is practically reversed, the fields being situated in an elevated position, and the very small streamlets, rivulets, and creeks where the workings are mostly situated dry up in summer, when work ceases. The top of Mt. Stewart, and Jones, and the top of the Nineteen-Mile Creek, are very much in the same position with regard to water-supply, as well as the workings on the edge of the plateau and the slopes of the Bald Hill. Plenty of water is necessary for successful mining, and work is often held up by the prolonged absence of rain. In the valley of the Nineteen-Mile Creek the work goes on all the year round, and here the most of the permanent camps are to be found, in a long stretch

of country reaching practically to the creek's confluence with the Savage River. The seasonal nature of the mining has a distinct influence on output, which makes the supplies coming from Tasmania somewhat erratic and uncertain.

5.—*Mode of Occurrence of Metal.*

For the most part osmiridium is found in a capricious, erratic fashion, distributed in the beds of creeks and rivers in the



"Panning Off" at Nineteen Mile Creek.

serpentine country. Here and there a miner may be seen working at a higher level on an old flood-plane, or he may be seen pursuing an old bottom, representing a former course taken by the stream, and quite different from the present day. Although the bulk of the metal has been won in this way, the up-to-date miner is now becoming more and more resourceful, and searching for and finding metal in quite unexpected places.

As already cited, high-grade metal has been successfully mined for a number of years out of the rock itself. This occurrence is the keystone to the whole situation. All the metal found in the river beds and creeks was derived from the solid rock originally, and has been weathered out by the natural agencies which cause denudation. On account of the phenomenal rainfall and climatic conditions of the western region, erosion has

View of Mine where Metal is found in Rock, Bald Hill.

taken place relatively quickly, and the amount of osmiridium found in the creeks at the present day must represent the metallic content of a prodigious amount of serpentine no longer existing.

When found in the rock the metal is not abundant, and may either be bright in appearance or coated with a black incrustation of iron ore; in which latter case it is not easily detected. It occurs in a curious fitful way, vanishing for a little, then reappearing, but never in excessive, though payable, quan-

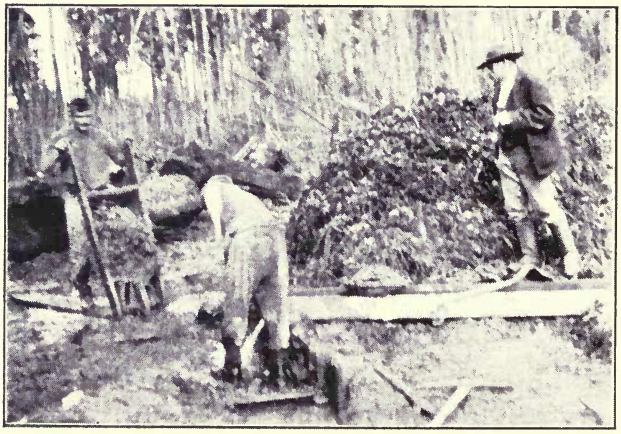
tities. In hand specimens the bright crystals are quite conspicuous, but when coated recognised with difficulty. Its distribution in the rockmass may take a definite trend or direction, which was determined before the solidification of the parent rock itself took place, and at a time when the crystals of osmiridium and its associates were floating free in the molten magma. In nearly all rocks of deep-seated origin the same phenomenon is quite familiar, the lenticular distribution of certain substances being brought about by the forces acting during magmatic movement before solidification.

A Knotty Problem of a Subterranean Occurrence of Metal at Mt. Stewart.

Once the miner turns his serious attention to the solid rock itself, new localities will doubtless turn up in Tasmania. He will also probably abandon the use of the word "lode," as applied to such an occurrence, and no one will regret it. Several of these so-called "lodes" have come into unfortunate prominence in the past, and some are talked of now.

A few quite exceptional occurrences of the metal may be cited before we finish consideration of this point. At one place a group of industrious miners, securing plenty of metal, may be found working 20 feet underground, following a subterranean drainage area which Nature made in the master-joints of the serpentine rock. It is a weird place to look at, and a safe-

looking place for Nature to store her treasures. In another locality men may be seen removing forbidding-looking grey mud in barrows, and sluicing it readily, thereby securing a plentiful reward in precious metal. This mud is but a few inches in thickness, and overlies in places rocks of sedimentary origin. Many miles away another group of men may be found working the loam, right on the edge of a plateau. The loam is full of organic vegetable matter, but uncommonly rich in osmiridium as well, which is all the digger cares about. Another quite unexpected locality, where the loam contains payable



Sluicing Mud for Metal at Wilson River.

metal, is right on the plateau itself of the Bald Hill, where some activity is likely to take place shortly. Other anomalies could be quoted, but enough has been said to show that osmiridium can be looked for and found in places altogether out of variance with commonly accepted ideas, theories, and traditions—which fact augurs well for the future development of the industry.

It might be noticed, in passing, that osmiridium is found usually alone or in association with gold, but never with platinum. Creek and river men look for water-worn nodules of iron ore, which are regarded by them as the invariable "index" of the presence of precious metal.

6.—*Quality of Metal.*

Osmiridium is known to occur in two distinct varieties, both of which are found in Tasmania. The variety known as Nevyanskite is the familiar tin-white substance with a bright metallic lustre, and is found in the Savage River, Nineteen-Mile Creek, Jones Creek, the Castra River, Wilson River, and the Bald Hill. The variety known as Siserskite has a much duller lustre, is steel-grey with a bluish tint in colour, and occurs in fair quantities at the top of Mt. Stewart. From a commercial standpoint Nevyanskite is much more valuable than Siserskite, and is eagerly sought after by manufacturers who use the precious metal. Both varieties occur in Russia, while Nevyanskite alone occurs in Japan. In the platinum fields of New South Wales, near Fifield, Nevyanskite alone occurs, and the same applies to Papua (British New Guinea). Tasmanian miners recognise and appreciate the difference between the two varieties, and the creek digger does not like his parcel mixed with any of the Mt. Stewart metal.

From a commercial point of view the best osmiridium yet yielded in Tasmania is derived from the Nineteen-Mile Creek, with its tributaries, as well as the Bald Hill. Here the metal is found well rounded or "shotty." This granular habit, combined with absence of well-marked cleavage planes, being the characteristics desired by manufacturers. On the Savage River much of it is very scaly or flaky, with the basal cleavage plane well pronounced. This is due, in all probability, to the severe pounding the metal has been submitted to by erosive agencies. The same applies generally to much of the Wilson River metal, though some of the new localities now being developed there are yielding prime granular metal.

7.—*Constitution of Metal.*

The feature that attracts the user most to osmiridium, commercially, is its percentage of iridium. Unfortunately, there has been very little research work done, as yet, with regard to Tasmanian metal, and very little information is available. The only two records of detailed analyses which the writer has access to, show a percentage of 58 and 33 respectively of iridium. The former was from a sample of the tin-white variety, above referred to as Nevyanskite, and the latter from

a sample of the variety known as Siserskite. Russian metal from the Ural Mountains shows at times as high a percentage of iridium as 77, and anything lower than 43 is exceptional. The Japanese metal is always round about 70 per cent., and that from Borneo about 60. From all other known localities a fair average is about 58 per cent., the metal corresponding in its features very closely with the Tasmanian metal.

8.—*Grading of Metal.*

The man who controls the situation is the man who uses lots of crude metal, just as it stands, for the purposes of manufacture. The smelter, chemist, and others count but little, as their requirements are easily met from residues derived mainly from the people who handle crude platinum. The best friend that the "osie" miner has is the man who tips his gold nibs for fountain-pens with crude granular metal. But with the latter the size of the grain is the only thing that matters, and anything too small or too large is unsuitable. These facts are well known throughout the osmiridium world, except in Tasmania. Everywhere else special sieves are used for grading the metal. Anything that goes through an aperture of ·031 is sold only for smelting or other metallurgical purposes. Anything up to ·042 from ·031 is suitable for manufacturing purposes. The shrewd miner could reduce his large metal to "point" size in a mortar, the small metal which fails to respond to the sieve test being set aside for the smelter. The importance of this procedure is made manifest by the fact that the writer has received, while preparing this review, cabled advice from New York stating that £20 per ounce is being paid for "point" metal, while only £15 per ounce is being paid for the ungraded supplies.

If the metal from Tasmania continues to be sold just as it is found the result of competition will inevitably drive the price right down to smelting price only, thus placing the Tasmanian digger in an unfavourable and false position with regard to other localities. Another matter which is likely to prejudice the future development of the industry is the habit of some of the miners of selling their metal "unclean." Nothing can bias the mind of a consumer against a locality so much as receiving parcels of metal containing obvious impurities.

The procuring and handling of corrosive acids in the bush is no simple matter, it must be admitted, yet most of the conscientious men would scorn to sell a parcel unless satisfied that it is actually clean, and this standard ought to be maintained by every right-thinking miner. It certainly involves a little trouble and care, but the result will have an important effect in the future when competition sets in. It must be frankly stated that Tasmanian parcels, up to the present, have been often characterised by the unnecessary

A Typical "Camp" at Bald Hill.

percentage of impurity, and in this respect compare unfavourably with those from other parts.

9.—*The Tasmanian Miner.*

The average type of man earning his living out of "osie" is, without doubt, one of the highest type of alluvial miners in the world. He is clean, hospitable, industrious, and skilful at his work, though perhaps a little conservative, and lives a secluded life in the most forsaken spots that ever a human being got to. He realises that he is not undergoing his hardships for nothing, and wants his "pound of flesh" all the time, but is fair and straight in a business deal. He is free from the common vices so prevalent amongst precious metal miners, and when he has "made a bit" he keeps it. His

home in the bush is never one of architectural beauty, but serviceable though temporary. He gets his letters and food brought to him from a long distance by carrier or pack-horse, and his contact with the outside world is slight. It may be a fascinating life to the man with "bushy" habits, who is fond of the wild; but he pays the price for it. His attention is concentrated on one thing only, viz., the desire to get the metal, get it quickly, and get it in plenty. Unlike some miners he makes no revenue from fur-bearing animals, though wild cats, ringtails, black and grey opossums are around him; while the black, tiger, and whip snakes are his sworn enemies. He gets anywhere from one-half to one pennyweight of metal from his daily digging, on an overhead average. When the price goes up he simply works less, because money becomes more plentiful, and the stimulus on output is not proportionate. It is true it attracts more miners, but the individual overhead average does not increase, but actually falls. From an industrial standpoint an inflated price is a check on the individual output of the metal.

10.—*Welfare of Miners.*

The sum of £44,833 was paid in Tasmania to miners during the last twelve months in the purchase of osmiridium, and the figure may warrant the assumption that the industry is now becoming important enough to draw increased attention to it from the State. An observer notices a general concensus of opinion among the miners that, for example, the mining laws as applicable to osmiridium might here and there be advantageously amended or amplified. They were obviously framed with gold in view, and on account of the peculiar differences and circumstances under which osmiridium is mined some modifications would doubtless be most helpful. Financial help from the State, in any shape or form, is altogether unnecessary and undesirable; but something could and should be done for the men by opening up and developing new serpentine country, making new tracks, improving old ones, repairing dangerous bridges, and other things which are obvious to the visitor touring the fields. The country lying around the top of Mt. Stewart has so far baffled penetration, but is likely to yield most interesting results when developed. It ought to be linked up with the Wilson River by dealing effectively with the inter-

vening bush. The conditions on the Savage are indescribably bad, and one cannot help admiring the indomitable pluck and grit of the men enduring them. Track-cutting and systematic bush-burning, under skilled direction, would go a long way to help the fuller development of the fields, and enable the digger to reap a richer and surer harvest than at present.

11.—*Some of Their Fallacies.*

A visitor, in chatting with the diggers, soon gets impressed with the constant repetition of curious erroneous ideas with

A Miner's Bush Fire at Jones Creek.

regard to the metal. Its reputed fabulous hardness is one of the things about which they like to talk, and about which there would appear to be widespread misconception. In the estimation of some the diamond itself pales into insignificance in hardness to osmiridium. As a matter of fact, the metal's hardness is nothing out of the ordinary, and many mineral substances occurring quite commonly in Nature are much harder. Another common misconception, arising perhaps out of the latter, is that the metal cannot be broken. The fact that it has one cleavage plane too well developed is one of the very features of the substance that manufacturers heartily dislike it for. To realise how easily it is broken, one requires only to put it in a mortar and pound it for a moment. Another

mistaken idea is, that it will not respond to metallurgical treatment, and cannot be smelted, which is quite on a par with the other misconception that Tasmania is the only country in the world where the metal is found. It would seem to have escaped notice altogether that the main and sole commercially important feature of osmiridium is its entire and absolute resistance to all acids.

One of war's results has been a considerable amount of metallurgical research work in the quest of a metallic substance yielding features identical with the metal under review. It has now been achieved, and a satisfactory substitute found, and markets are bound to be affected shortly to a profound degree. For, as soon as the manufacturer has his requirements fully met by the synthetic substitute, he will cease to interest himself in the purchase of metal at prohibitive prices in remote parts of the world. He will shift his worries on to the shoulders of the metallurgist, who can have no difficulty in procuring the strictly limited quantities of crude metal necessary for his purposes.

12.— *Outlook for the Future.*

After Peace is signed and Reconstruction takes place in earnest, every metal of commercial importance will be under better control than in the past, and its destination closely observed. Of recent years Tasmania has already secured a place, and firmly established herself, as a producer of osmiridium. The miner may at present be inclined to be pessimistic, but he really has a bright future in store for him. Let him be more enterprising and less conservative, let him shut his eyes to abandoned ground, adopt new ideas and seek new fields, let him "get up and get" and decline to be despondent; let him have all the help and moral support of the State, and things will go apace. The resources of Tasmania have only begun to be tapped, for no man can say even the exact location of, far less the full extent of, all the serpentine country in the Island, and a great deal of hard, patient, and profitable work still remains to be done. The miner must, however, bear in mind that the inevitable will happen, and competition will force down the price till a condition of stability is attained.

He will doubtless recall that in 1910 his average price was £4 8s. per ounce; in 1911 it was £4 7s.; in 1912 it rose to £7 7s.; while in 1913 it reached £9 10s.; followed in 1914 by £9 17s. per ounce. After war broke out it was impossible to sell the metal at all, until recovery took place, and the price fell in 1915 to £6 8s. In 1916 it again rose, the figure being £8 11s., eclipsed again by 1917, which reached £14 15s. per ounce. The climax, however, was reached in 1918, when the average rose to the astounding figure of £27 18s. Some parcels were actually sold as high as £37 10s. The cessation of hostilities caused a considerable drop in price, and the figures for the first quarter of the current year show an average of £16 5s. per ounce.

These figures are taken from official records of the Mines Department, Hobart, and are sufficient to show that the Tasmanian miner has been singularly fortunate in his earnings of recent date. During the whole war the price of platinum, about which the price of osmiridium normally gyrates, never rose above £20 per ounce, and was commandeered for munitions. Osmiridium never was, though at one time it was proposed to commandeer it, and fix its price. The enormous inflation of the Tasmanian price was due to the anomalous circumstances under which metal is bought and sold in this country. The outlook, as far as price is concerned, is fairly well defined. It is bound to fall sooner or later, in view of competition, until equilibrium is established. If it did not, foreign dealers would soon import metal into Tasmania; or, far more likely, seek a direct contact with the buyers who keep Tasmania going, and secure their business by under-selling.

13.—*Comparison with Other Fields.*

Within the Commonwealth of Australia osmiridium occurs in several places. On the coast of Victoria, at no great distance from Melbourne, it has been found along with gold, in a black beach sand, but so far only the crudest methods of cradling have been employed to recover it. At Byron Bay vicinity the metal occurs in a highly comminuted condition, which has baffled efforts to handle it commercially. In New South Wales the platinum miners find it both in the shallow ground and deep leads, and their parcels contain as a rule 5 to 10 per cent. of the metal mixed up with platinum. In

Papua some splendid parcels have been produced, resembling those of the Nineteen-Mile Creek metal. So far very little mining development has taken place in Papua, largely on account of native difficulties and official indifference, but the metal is reputed to occur abundantly, and there is a possibility of Papua in the near future out-rivalling Tasmania as a source of the precious metal. It is stated that German New Guinea is another locality for the metal, but reliable information on the subject is still lacking. In Borneo the natives, while working platinum, are finding first-class metal, which finds its way into the hands of dealers in Batavia. The output of Japan is more than three times that of the Tasmanian, while the metal has a brighter lustre, being richer in iridium, and slightly larger in grain and less fissile. The miner there pays 4s. a day for his permit, and has to be content to sell his parcels at a low figure. The dealer, broker, and exporter secure the profits. Ever since Russia's collapse in the war the main supply was cut off from the world. In normal times she can produce ten times more than Tasmania, and, on account of cheapness of labour, sell the metal at a price which determines the dead-level. In North America we find it occurring with platinum in North California and South-West Oregon, and in Albany County, Wyoming, and in the Yellow Pine District, and Moapa, in Clark County, Nevada. In Colorado it turns up at Como, and Clear Creek, and Villa Grove. Turning now to South America, we find an area of 5000 square miles where alluvial mining takes place, on the western side of the Andes, in Colombia. Gold, platinum, and osmiridium are found here together, and many dredges are kept busy. The control is under American and British hands, and it may be noted that after Russia's collapse in the war this field saved the situation, as far as platinoid metals were concerned, for the purposes of war.

14.—*Where the Metal Goes To.*

At this juncture it might be well to clear up some points with regard to the final destination of the metal. Taken altogether, there are comparatively few people throughout the world that have any commercial interest in osmiridium. Of these few some want it for iridium, others for osmium, or other rare substance combined in its constitution. The big buyer

is the manufacturer who uses it in crude form. He needs it as an essential and important item in the manufacture of the pen-nibs used in fountain-pens. This latter industry has already assumed enormous proportions, especially in the United States of America. One firm alone has five factories, each of which is a marvel of organisation, and equipped with cunningly-devised machines. There one can see osmiridium being handled by highly skilled labour; each individual grain being sifted out and arranged in its proper place, according to its suitability; while the delicate operation of attaching it on to the gold nib is one calling for infinite patience and deftness. Platinum could almost be used in place of it, but it is too soft, and has other features which render it less desirable.

The great bulk of the metal, which has lain for millions of years in the rivers and creeks of Tasmania, and about which all the "osie" digger's hopes and aspirations are centred, finds an ultimate fate in being lodged finally in the breast-pocket of every business man up-to-date enough to arm himself with a fountain-pen.

15.—*How it is Bought and Sold.*

Each miner has always some metal held in reserve. He keeps it carefully tied up, somewhere about his person, in a piece of chamois leather firmly bound together. When his "tucker bill" comes along, he has to realise on part of it, and receives either cash or an open cheque from the visiting field buyer. It may be mentioned here that many of the miners have grievances at the hands of the buyers. Quite commonly a buyer in going his rounds, in the same day will tactlessly buy parcels for different prices in different localities, or even in the same locality. Ultimately the miners who carried out the deal find out what has happened, and dissatisfaction and bitter feeling arises. Again, several buyers may be on the field at the same time, and each one offering a different price. The miners will subsequently compare notes, air their grievances, and be at a loss to know what to do next. It seems also desirable here to observe that the delicate operation of weighing small quantities of osmiridium should be under better control, and the weights and scales used by the buyers for the purpose should come under official periodic inspection. It must be admitted that the miner

has justification in being discontented with the present system, which certainly does not exist on any other precious metal field in the world.

To do the miner full justice the field buyer should have no power whatever to lower, raise, or otherwise manipulate the price of the digger's metal, and the field buyer should himself be debited with all the obvious impurities in the parcels he buys and sends off. Consumers would insist on both points if they were only familiar enough with the full facts of the situation. Most movements in price in the immediate past

A Field Buyer on His Rounds.

have been of trivial origin, and it is credibly related of one field buyer that he raised the price £2 per ounce for a wager! While this might be an exaggerated piece of pleasantry, the situation is undoubtedly wrong at present and needs to be remedied. It is particularly aggravated by the various mining localities being so far apart, and out of touch with each other. Furthermore, in the same locality the individual workings and camps are either far apart or inaccessible to each other, and the men come little in contact with one another. There is no unity of purpose, cohesion, or organisation among the miners on account of the lives they lead, but something might now be done officially to get things on a better business footing for them.

The writer has had the privilege of visiting all the mining fields, and coming in personal contact individually and collectively with nearly all the miners, and, with one exception, every single man thinks that his welfare might be better cared for and the industry fostered by more official assistance. They are most appreciative for what the Mines Department has already done on their behalf, and on account of the very remoteness and obscurity, and one might almost say mystery, of the industry, as well as lack of proper organisation, they realise that nothing more could possibly have been done in the past for them by the Government.

Let us look at the other side of it. New York and London are the two controlling centres for metal buyers. The business men sitting at their desks there are more to blame perhaps than anyone else for existing irregularities. They have never been to Tasmania. They instruct a local broker, who instructs an Australian broker, who in turn instructs a field buyer, giving him *carte blanche* instructions to procure the metal.

The field buyer is usually a working miner, actually digging for and selling metal as well as buying it, which is of course unfortunate from a business standpoint. With one or two exceptions the Australian brokers know nothing whatever about the Tasmanian fields from personal experience, and the man in New York or London keeps on wondering why the Tasmanian price for metal is so abnormal. No one can blame the hard-working, industrious "osie" miner for taking the fullest advantage of the peculiar situation and getting every hard-earned penny he can out of it as long as it lasts. But the moment is coming when the man in New York and London will wake up.

Russian parcels are already filtering their way through Vladivostock, Harbin, and Shanghai, *en route* to America and England. While in the Far East, of very recent date, the writer had an opportunity of inspecting quite a large number of parcels of precious metal so derived. Colombia is exceedingly busy, and Japan is out to capture the market. Tasmania must therefore take steps to retain her place, and find out what the rest of the world is doing. By posting the miner up with information, derived officially, as to what current prices are in controlling centres, by regularly publishing

same in the press in Tasmania and Melbourne, and by sending out periodic official circulars by packers and carriers from the nearest resident Registrar, steps could be effectively taken to ensure the fullest development of the industry, and make the osmiridium miners perfectly satisfied and contented with their lot.

JOHN VAIL,
GOVERNMENT PRINTER, TASMANIA.