

I presume, on the analogy of *Gebia*, that the specimen bearing the well-developed 1st and 2nd pleopods is a female, and that the others are males, but I am unable to find any well-marked external sexual characters to confirm this supposition. The large chelipeds are found in both.

EXPLANATION OF PLATE XVI.

- Fig. 1. *Callianassa filholi*: large cheliped (from left side of specimen);
 × 2½.
 Fig. 2. *Callianassa filholi*: small cheliped (from right side of same specimen); × 2½.
 Fig. 3. *Callianassa filholi*: 1st pleopod (? of male); × about 7.
 Fig. 4. " 1st pleopod (? of female); × about 7.
 Fig. 5. " 2nd pleopod (? of female); × about 7.

ART. XLI.—*The Comparison of the Oceanic Languages.*

By the Rev. C. E. Fox.

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THE present paper is written with the object of drawing attention to the present state of our knowledge and the large field for inquiry which lies open to us, not in order to offer anything original. Many difficulties present themselves to any one who tries to compare two Oceanic languages—for example, Maori and Mota (Banks Islands). If he has been told that they both belong to a common Oceanic stock he is surprised to find on comparing their vocabularies how many words differ, and not by any means only rare words, but in many cases the names of common objects and actions. This difficulty may be met in one of two ways. The shortest, and at first sight the simplest, explanation is that there is really no common stock at all, but that one language has borrowed a certain number of words from the other—he would suppose either that Maori had borrowed from Mota, or possibly Mota from Maori. But as his knowledge of the two languages grew wider and deeper he would soon begin to doubt whether the borrowing theory would not raise more serious difficulties than before, and some knowledge of Oceanic languages in general would confirm his suspicions. Convinced that the best explanation after all was the origin from a common stock, he would have to explain in some way the diversity in the two vocabularies. Some suggestions by way of explanation are here brought together.

The simplest division of the Oceanic languages is that proposed by Mr. S. H. Ray,* who distinguishes four main branches from the common stem :—

(1.) Indonesian, comprising the languages of Madagascar, Malacca, Sumatra, Java, the South-eastern Sunda Islands, Borneo, Celebes, the Philippines, and Formosa.

(2.) Micronesian, comprising the languages of Palau, Caroline, Marshall, and Gilbert Groups.

(3.) Melanesian, comprising the languages of the Bismarck Archipelago, portions of south-eastern and north-eastern New Guinea, the Solomon, Fiji, Banks, and New Hebrides Groups, the Loyalty Islands, and New Caledonia.

(4.) Polynesian, comprising the languages of the Eastern Pacific from Hawaii, Marquesas, and Easter Islands to Samoa, Tonga, and New Zealand.

The term "Papuan" is now restricted to non-Oceanic languages which are found in parts of New Guinea, especially on the west coast. Traces of a non-Oceanic language are also found, it is thought, in the Moluccas, the northern Solomons, Santa Cruz, and Paumotu.

Mr. Ray has shown that, excluding the exceptional areas above mentioned—(1) The vocabulary shows evidence of a common origin; (2) apparent differences in grammar are modifications of the same methods rather than actual differences of structure; (3) the principal constructive particles are the same; and (4) the languages are in various stages, of which the Polynesian is the latest.

The present paper deals only with the first point, and with that only in a negative way. The positive evidence in favour of origin from a common stock is very strong. It is gathered partly from the number of common words, and partly from the varying form of these words precluding the possibility of one group having borrowed from another. Mr. Ray mentions such words as the Maori forms *rau*, *rimu*, *taturi*, which are found in one dress or another all over the Oceanic region; and the list of such common words is a large one. But there is also real diversity even in every-day words, and this is no less interesting than the agreement.

It is worth while to remark at the outset that it is impossible in a general way to speak of one group as having borrowed from a neighbouring group the words common to both. There is a tendency, for instance, to speak of "the Polynesian element in Fijian" or "the Malay element in Maori." Borrowing there undoubtedly has been, but with our present knowledge of the

* S. H. Ray, "The Common Origin of the Oceanic Languages."

history of these languages such phrases are only misleading. For example, there is an Oceanic language spoken on the shores of Bartle Bay, on the north-east coast of British New Guinea, in three villages, Wedau, Wamira, and Divari; of this language a short dictionary has been published.* Any one examining its vocabulary, after having learnt the language of Mota, in the Banks Group, would recognise about 20 per cent. of words common to the two—such as *ia*, fish; *ama*, father; *qari*, owl; *ivo*, tooth; *ire*, pandanus; *lagi*, wind; *digo*, staff; *baba*, talk; *mata*, eye; *nogi*, nest; *numa*, house; *ruva*, measure; *bara*, bent; *uma*, drink; *uwa*, bear fruit; *tano*, earth; *natu*, child. The same number, perhaps, would be recognised by a person who knew Maori—words such as *baba*, slab; *koti*, cut; *kumara*, sweet potato; *manu*, bird (only in compounds); *mutu*, cape (?); *nima*, hand; *tutu*, nail; *tae*, excrement; *tamga*, ear (?); *tarai*, cut down; *toi*, drop or trickle; *waga*, boat; *tuna*, eel; *bebe*, butterfly; *muriai*, afterwards. A person conversant with the language of Florida would probably notice quite as many words whose forms were alike—e.g., *gigi*, toe or finger; *tete*, ridge or path; *ai*, tree or wood; *kokorereko*, fowl; *buruburu*, long grass. Some of the above words are common to all three—Mota, Maori, and Florida. Are we, then, to speak of a Mota, or a Maori, or a Florida element in Wedau? Evidently this is impossible: the words are from a common Oceanic stock. There are, of course, some cases where we know that a word has been introduced from one group into another, but otherwise it is only misleading to speak of a Melanesian, or Malay, or Polynesian element in some other kindred group—as misleading as it would be to say that Wedau contained so-many words borrowed from Maori, so-many from Mota, so-many from Florida, so-many from other islands, with perhaps a real native element of 5 or 6 per cent. of true Wedau words.

Again, there is no doubt that a Melanesian differs very much from a Polynesian or from a Malay in physical features. Whether the Polynesians of the Eastern Pacific are a race resulting from the mixture of a dark Melanesian people with traders from the mainland—a race who spoke the language of their Melanesian mothers rather than that of their foreign fathers†—or whether the two races are distinct and one has imposed its language on the other (if this be credible), is really not a question for the student of languages. How it happens that people so different in physical features speak languages which are branches from a common stock he cannot tell.

* By the Rev. Copland King, M.A., of the Anglican New Guinea Mission.

† Suggested by Dr. Codrington, "Melanesian Languages," page 33.

The settlement of the peoples of the Melanesian group must have taken place long before that of the Polynesian peoples, because the languages of the former group differ much more among themselves than those of the latter group do. A student of Polynesian languages finds a marked agreement between the languages of two Polynesian islands, such as Tonga and New Zealand, once a regular change of letters, such as *h* and *s*, *f* and *wh*, *l* and *r*, has been made. In fact, a Native of the one can make himself understood by a Native of the other. This is not at all the case in Melanesia. A Native of the Banks Islands would be quite unintelligible to a Native of the New Hebrides, or southern or northern Solomons, or Fiji. Students of Polynesian languages do not perhaps realise this. They suppose that the Melanesian languages agree among themselves as much as the Polynesian languages do; but the diversity of their vocabularies is really remarkable. In fact, the vocabulary of the northern Solomons shows more agreement with that of the northern New Hebrides than with that of the Banks Group, which lies midway between the two. All this points to ancient settlement and long isolation. The settlement of the Eastern Pacific must have been much more recent, and the constant state of warfare, in which the Melanesians lived, their isolation and lack of trade enterprise in most cases, all tended to add to that divergence in their languages which long settlement would naturally produce.

Some words have been introduced into certain Melanesian languages from other kindred groups or from foreign sources. The Mota word for cloth is *siopa*. The Mota people themselves say that they obtained this word from a party of Polynesian foreigners ("Tongans") who settled at Qakea, a little island off Mota, more than sixty years ago and remained there for a short time: thus *siopa*, from the Polynesian *siapo*, by metathesis. Here we have a distinct Polynesian element in Mota, a Melanesian language. *Kumara* is said to be the word now used for "sweet potato" in Fiji, the name being formerly *a-kawai-ni-vaivalagi*. Here is a distinct Polynesian element in Fijian. It would be most interesting to know more of these real cases of borrowing among the different groups. Of course, English words in Native dress are now common. *Sem* in Mota means "to scold," and owes its origin to the character of a trader who lived at Mota, Mr. Sam Fletcher. The shell used as a chisel at Mota is called *tive*; it was not known at Raga, where they call a chisel *bisope*, because these tools were first obtained from Bishop Patterson. In languages so capable of coining new words local passing terms may become permanent, and even displace older forms.

Some words, again, will drop out of a language because they become *tapu*, or at least will lie somewhere at the back of the language, like a person's name when we say we have it at the tip of our tongue; or old forms may only be preserved in the language spoken by chiefs. At *Mota* a man may not use words which form part or the whole of the names of his relations by marriage. If a man has a relation named *Pantutum* he must not use either of the common words *pane*, hand, or *tutum*, hot. He uses other words only kept for such occasions, but perhaps survivals of older forms. All such restrictions must be taken into account in explaining the divergence of vocabularies.

Some words, too, are pretty sure to be merely local terms which have taken the place of the more widely spread form. The *Mota* *qatia*, an arrow, is probably one of these. *Qatia* means "tree-fern," then the arrowhead made of tree-fern wood, then the arrow itself. In the New Hebrides, though *qasia* means a "tree-fern," the word for "arrow" is quite different—a form of *lipa*, a widespread oceanic word. In *Raga* this is found as *lia*, and it may occur in *Mota* in the words *liamule* and *liawora*.

Melanesian languages are very rich in their power of forming adjectives—e.g., by prefixing *ma* or suffixing *ga*. For this reason adjectives should not generally be compared. *Malumlum*, the common *Mota* word for "soft," is perhaps formed from *lum*, a root, which means moss or seaweed. But another group will be quite as likely to take some other substance as the characteristically soft thing. The *Mota* word *gesagesaga* means "bright-blue," and is formed from *gegesa*, the name of a *Tradescantia* with bright-blue flowers, or from *gesa*, the name of a bright-blue volcanic stone found in the neighbouring island of *Vanua Lava*, with the adjectival suffix *ga*. But there is no reason for supposing that the people of the next island will take the tree *gegesa* or the bluestone *gesa* to describe all bright-blue objects. A tree in *Mota* called *resa*, with flowers striped pink and white, may be the origin of the *Mota* adjective *resa*, striped. The Florida word for "red," *sisi*, is the name of the red *Hibiscus*.* The Duke of York word for "red" is *dara*, which is obviously the common Oceanic word for "blood."* The word *ngira* is the name of a hard-wooded bush in *Mota*; in New Georgia the same word means anything hard.*

In such a poetic race as the Oceanic peoples the general tendency of all languages to use metaphor and then forget that the word was metaphorical will have full play, and some objects, such as a rainbow, a river, or a hurricane, will be expressed by varying metaphors. Thus, a bridge in the language of *Wedau*,

* Dr. Codrington, "Melanesian Languages."

in New Guinea, is *ai tete*, which means "a wooden path"; in Mota it is *pe lagolago*, which means "the water-crosser"; in Maori, *ara whata*, perhaps "the raised path."

In many Oceanic languages *tæ*, excrement, has the secondary meaning of "rust"; but in Mota, *wal*, which means "to rise in lumps," like fat in cooking or gum on trees, is the word used for "rust," although *tæ* has its usual meaning.

The Wedau word for "nail" is *tutu* (Maori *titi*), the same word meaning "elbow," "knee," or "pins in the outrigger of a native canoe"—*i.e.*, something which sticks out. The same word in the New Hebrides means "spikey." The New Hebrides word, however, for "nail" is *turi*, which means "that which goes through an opening," and is also used for "needle," and (as a verb) for a ship going through the narrow entrance into a harbour. But in Mota the word used for "nail" is *pismarawa*, the finger of Marawa, a fairy, fairy-finger.

"Black lava" in Maori is *rangitoto*, a word which means literally "sky of blood," no doubt so named from the appearance of some active volcano. In Mota they more justly call it *vat maeto*, the black or dirty stone. "River" in Tongan is *vaitafe*, the flowing water; in Mota is it *peilava*, the large water; in Florida *beti tina*, the mother water. "Hurricane" is *langvus* in Mota, which possibly means "the wind that strikes." In the New Hebrides it is *siritano*, that which passes over the ground like a razor. "Rainbow" in Mota is *gasiosio*, *siosio* meaning "bent like a bow"; in Maori, *kahukura*, the red surface or covering (of the sky); in Florida, *langigabu*, the rain of blood, or the sky of blood.

In comparing vocabularies this fondness for metaphor must be especially allowed for in Oceanic languages.* But the real reason why the words so seldom seem to correspond is that they occur at what Dr. Codrington calls "different levels of language." For instance, the name of a common object may be quite different in Maori and Mota, but the Maori word appears after all in Mota, only at a different level—*e.g.*, in the name of a village—and the Mota word at another level in Maori. For real comparison a vocabulary of two or three thousand common words is not sufficient—a thorough knowledge is needed of obscure and little-used words, and also as wide a knowledge as possible of Oceanic languages in general. And in this respect a great deal might be done in Melanesia, where most of the languages are little known.

The following are some interesting examples of the appearance of words at different levels in two or more languages. Many

* In Mota, safety-matches are called *masis matamotmot*, "stingy matches," because they will only strike on their own box.

of the examples are taken from Dr. Codrington's "Melanesian Languages." The Motu (New Guinea) word for "water" is *rano*; in Fiji "water" is *wai*, quite a different word; but *rano* occurs in Fiji in the form *drano*, which means "a swamp, or pool of water." *Maso* means "the sun" in Espiritu Santo; elsewhere in the New Hebrides it means "a star"; in Mota only "the morning star," *maso maran*. In Madagascar *maso* occurs with the meaning "eye," and is also found meaning "the sun"—*maso andro*. Thus a comparison of the Mota and Espiritu Santo words for "sun" would show no agreement; yet the Espiritu Santo word is present in Mota, only at a different level.

If the Maori and Mota words for "blood" be compared they are found to be very different—Maori, *toto*; Mota, *nara*. In both these languages the word for "sap" differs from that for "blood," but in the New Hebrides the same word is used for both—*daga*, blood; *dagavi*, sap: and also in Fiji, where *dra* means "blood" or "sap." This is the Mota *nara*. But *toto* also occurs in Mota at a different level in the word *totoi*, a poisoned arrow, from the *totoai*, sap, with which the arrowhead was smeared. In San Cristoval, southern Solomon Islands, *toto* means "congealed blood"; and in Florida, where the ordinary word for "blood" is *gabú*, *mimi toto* is the name of a blood-disease. A mere comparison of the Maori, Mota, and Florida words for "blood" would show no agreement.

The Maori word for "sky" is *rangi*. Compare this with the Mota *tuka* and no agreement is seen. But *rangi* occurs in Mota in the form *langi*, which means "wind"; in San Cristoval this means "rain," while in Florida *langi gabú* is "the rainbow."

The Maori words for "shore" and "inland country" are *tatahi* and *uta*; the Mota words are *lau* and *uta*: the second in both cases is the same word, the first differs. But *tatahi* is only another form of the Polynesian *tahi*, the sea or salt water, and *tahi* (which occurs in Melanesia either as *tahi* or *tasi*) is found in Mota in *Tasmate*, the name of a village on the lee side where the sea is *mate*, dead; in *tasig*, to season by pouring salt water over a Native oven; and most likely in *tas*, a retiring-place, which was probably in the sea. The Mota *lau* is the Malay *laut*, a second Oceanic word for "sea." But any one comparing the Mota and Maori words for "sea" or "shore" or "salt water" would find no agreement.

So, there are two Oceanic words for "bird," *manu* and *kiu* (unless the second is a relic of a non-Oceanic language, as it perhaps may be); Maori has *manu*; Santa Cruz, *kio*; while Wedau, in British New Guinea, has both—*kiu* the generic name, and *manu* the specific, only used in compounds: *manubada*, the fish-hawk; *manuqari*, the owl; *manutoa*, the seagull.

The Mota word for "dirt" is *lepa*; in Florida the word used is *meto*. *Meto*, however, is found in Mota as the name for a small black mole on the skin; in the form *maeto*, black basalt; and in the New Hebrides *meto* is "black," the "deep sea" being *tahi meto*; perhaps the Maori *meto*, putrid, may be the same word. The Mota *lepa*, on the other hand, is found in the Solomon Islands in the Bugotu word *dhepa*, meaning "ground," and in Polynesia as the Tahitian *repo*, earth, mould, dust, and Hawaiian *lepo*, ground, soil, dust, or dirt.

Panei is the Mota word for "hand," Maori *ringa*; but *ringa* in the form *lima* finds a place in Mota as part of *tavelima*, five, and in the phrase *van vivsag lima*, walk with hands clasped; and as a substitute for *panei* if the speaker has a relation by marriage in whose name the word *panei* occurs.

In Wedau *vigo* means "to whistle"; in Mota this is *was*; but the Mota word for native panpipes is *vigo*.

The Merelava (Banks Islands) word for "sit" is *sag*, the Mota word *pute*, though Mota is only forty miles from Merelava. However, *sag* occurs in Mota as *sage*, to sink (used of a stone sinking to the bottom of a pool).

The Wedau word *bara*, bent (*barabara*, a bend or angle) shows no resemblance to the Mota *sigerai*, an angle. But it occurs in Mota as *parapara*, an axe (the blade set sideways, unlike the adze); *sus para*, to crouch aside; *mule parapara*, to go slanting off; and *Ureparapara*, the name of an island in the Banks Group with steep slopes—"the place of slopes." A Malay word *parai* means "to go zigzag" (as a ship tackling); and a Maori word *parahi*, a steep slope or acclivity, which Mr. Tregear derives from *pa*, to block or obstruct, and *rahi*, great, is much more likely to be connected with the New Guinea *bara* and Mota *para*. Thus, though the New Guinea *barabara*, angle, shows no agreement with the Mota *sigerai*, the Malay *juru*, or the Maori *hau*, it nevertheless occurs in Mota, Malay, and Maori, but at a different level of language.

The Maori *tiro* and the Mota *ilo*, to see, may possibly be forms of the same word, but *tiro* itself occurs in Mota in the phrase *tiro o tamate*, become initiated into the secret society called the *tamate*, see clearly into its mysteries (any one not yet initiated being said to be *matauwonwono*, blind); and probably in *tironin*,* the pool of clear water into which a man gazed to see his own image (the New Hebrides *titiro* means "to gaze into the sea looking for fish" or "to gaze at one's image in water"); and in *tiro*, clear or transparent.

Mr. Tregear gives a number of interesting meanings which

*The word now used for glass.

the Maori *koko* takes—*i.e.*, different levels at which it appears in different languages. In Maori, he says, it means “a spoon,” “a shovel,” “a shrimp-net,” or the act of taking up with these, or baling out a canoe; in the Solomon Islands “a basket.” In Java *gogoh* means “to catch fish in shallow water by inserting the hand under them.” This word *koko* in Mota means “to lift up water in the hands”; *kokos*, to enclose, as fish in a net, or people in a church; *kokota*, narrow. In the New Hebrides *kokoti* is a net for catching fish. It is safe to say that hundreds of such instances of words occurring at different levels might be given.

Mr. Tregear, speaking of Malay and Maori, writes: “Many important Malay words, such as those for sky, fire, root, hill, eye, &c., resemble Polynesian, and are almost certainly related, but other vital words, such as sun, moon, mother, son, true, smoke, &c., have no apparent likeness.” Although they have no apparent likeness, most of those mentioned certainly strengthen our belief in the common origin of Malay and Maori.

The Maori for “sun” is *ra*; the Malay *mata ari*, eye of day, *mata* meaning “disk,” in some languages “eye,” in others “face,” with which meaning it appears in Maori. The Maori for “moon” is *marama*; Malay, *bulan*. It is quite possible, since *vula* in both Mota and Fijian means either “moon” or “white,” that the Malay word, if not occurring in Maori, yet does occur in allied Polynesian tongues—in Paumotu as *pura*, phosphorescent (Florida, *pura*, white); Tahiti, *pura*, flashing; Samoan, *pula*, to shine.

The Maori *rakau*, tree, is seen in the Fijian *kau* and the Malay *kayu*, wood, timber, tree. The Maori *au*, smoke (in Tongan, *ahu*; Mota, *asu*), is the Malay *asap*, probably a compound of *asu*, smoke, and *api*, fire.* The Maori for “child” is *tamaiti*, and the Malay *anak*; but the Malay word (at a different level) may perhaps be found in the Maori possessive noun *na* (as in *naku*, mine), the Mota *anai*, which means primarily “an appendage or belonging.”*

Thus vocabularies which at first sight appear to differ are found to show real agreement. The discovery of a fair number of common words might be explained by trade intercourse, but it is difficult to see how the same word occurring at different levels of language in different islands can mean anything but origin from a common stock.

To give an example of the apparent diversity of vocabulary, only bringing out into brighter light a deep though hidden

* Dr. Codrington, “Melanesian Languages.”

agreement, ten words are given from Mota in the Banks Group and Raga or Pentecost Island in the New Hebrides—the words for bamboo, sap, cave, finger, sea or salt water, picture or image, black, shoot, bend, go.

		Mota.	Raga
Bamboo	..	.. Au	Bua.
Sap	..	.. Totoai	Dagavi.
Finger	..	.. Pisui	Qararuga.
Cave	..	.. Lia	Malanga.
Sea	..	.. Nawo	Tahi.
Image	..	.. Totogale	Nunu.
Black	..	.. Silsiliga	Meto.
Shoot	..	.. Tiga	Bubus.
Bend	..	.. Taqa	Siolo.
Go	..	.. Mule	Lago.

There is no agreement between these lists. However, the Raga *bua*, bamboo, occurs in Mota in the word *pue*, a bamboo water-carrier (*cf.* New Britain *pu*, a bamboo; Oba *bue*, a knife—a native knife being made from the bamboo).

The Raga *dagavi*, sap, is a form of *daga*, blood, which is found in Mota as *nara*, blood.

The Mota *pisui*, finger, is found in the Raga form *pihu*, which means “the last joint of the finger” or “the finger-nail.”

The Raga *malanga*, cave, is very likely the Mota word *malanga*, which means “a lifting of the clouds after rain,” or “a spot in the forest where the undergrowth has been cleared away.”

The Raga *tahi* is found, as already mentioned, in the Mota *Tasmate*, the name of a village; and the words *tasiq* and *tas*.

The Raga *nnunu*, an image, is the Mota *nnunui*, a shadow with well-defined figure (not shade).

The Raga *meto*,* black, is found in the Mota *meto*, a small black mole on the skin, and *maeto*, basalt.

The Raga *bubus*, shoot, occurs in Mota in the form *pupus*, to puff out (as a whale spouting, or the wind through a narrow opening). The surf also is said to *pupusag* in narrow clefts. It is no doubt the Maori word *puki*, to blow; and perhaps the Mota *vus*, in *langvus*, a hurricane, is the same. In that case the original stem has in Mota two shoots, *vus* and *pupus*—as *burung*, bird, and *bulu*, feather, in Malay are said to be shoots of one stem; and *vava*, speak, and *wawanga*, open the mouth, in Mota. In Mota *tamate tiga* is the word used for “gun”—*i.e.*, ghost-shooter; in Raga it is *bubusi*, the puffer.

* It is interesting to note that in Raga *meto* is “black” and *bili* is “dirty,” while in Florida *bili* is “black” and *meto* is “dirty.”

The Raga *siolo*, bend, is found in the Mota word *siolo*, which means "to crawl like a snake": the prominent idea is no doubt the folds into which a snake throws its body, as in the Mota *gasiosio*, a rainbow.

The Raga *lago*, go, is found in several Mota words: *tap-lagolago*, now used of a cart from the fact of its going on wheels, formerly "a wheel" (children made a hoop of sago fronds and set it rolling, crying "*Tap* lagolago*," "It runs of its own accord"); *pelagolago*, a bridge; *lago*, a rare word meaning "to take long strides"; *lagota*, a giant. On the other hand, the Mota *mule*, to go; occurs in Raga with the sense of the Mota *kel*, to go and return back again; and in Mota this meaning of *mule* is still found: *mule*, to be refreshed; † *muleag*, the trees budding again in spring; *lut mule*, the wind blowing softly after a storm; and perhaps in *lia mule*, to shoot a member of one's own party in a fight. Probably it is a form of the Maori word *muremure*, to return to a thing frequently.

To all such sources of real or apparent diversity must be added phonetic changes, which disguise words more or less. The change between Maori and Tongan of *l* and *r* is quite regular. A dialect of Oba, New Hebrides, is said to be exactly like a neighbouring dialect except that *h* always takes the place of *s*.

We must remember, too, that the letters in these languages do not represent exactly English sounds. The Melanesian *g*, for example, is not the English *g*, and has been compared with the Hebrew *ain*. When the language was first written, it was sometimes written as *k*, sometimes as *r*, sometimes altogether omitted; thus *takai* was written for *tagai*, *raru* for *garu*, *ate* for *gate*. This fact explains how the Raga *daga*, blood, can be the equivalent of the Mota *nara* (*d* and *n* being a common interchange); the Mota *qaso*, a rafter, of the Maori *kaho*; and the Mota *magarosa*, pitiful, of the Maori *aroha*—the *ma* of *magarosa* being the conditional prefix. The Malagasy *o* is sounded *u* (*oo*), so that the Malagasy word *toto*, to pound, is clearly the same with the Mota *tut*, to thump with the fist. Mr. Tregear says of the Malagasy word *vorodolo* that it is an example of how letter-changes may cloak a real affinity—the Malagasy *voru*, bird, being the Maori *huru*, and *dolo* the Maori *ruru*. The Mota word *langvus*, hurricane, is probably the Maori *rangi*, sky, and *puki*, blow. The Malagasy word *havitra*, hook, is found in the Loyalty Islands in the much-altered form *ge*. ‡

The conclusion one would draw from these various facts is

* As in *tapsoqa*, a board falling out of its own accord.

† *Mate mule*, to faint—i.e., to die and come to.

‡ S. H. Ray, "The Common Origin of the Oceanic Languages."

that these languages, in Melanesia especially, are those of peoples long settled. That there are foreign elements to be taken into consideration is certain. The Malays have borrowed from Asia, especially India. The Polynesians may also have borrowed words either before their migration or to some extent from the people they dispossessed. In Santa Cruz, Savo, Vella Lavella, and some bush dialects, Mr. Ray (and modern German philologists) believe there are traces of a pre-Melanesian tongue. In New Guinea, Papuan words have been borrowed, in some cases plentifully. This borrowing from foreign sources is a very different thing from an Oceanic language, such as Fijian, borrowing from another Oceanic language, such as Tongan.

Where the diversity of vocabulary arises from mere borrowing from a kindred tongue, from certain words becoming *tapu* and dying out while other (less common) forms are substituted, from merely local use or local metaphor, from the appearance of words at different levels of language, or from phonetic change, a fuller and wider knowledge will show it to be more apparent than real.

The most interesting field for the student of Oceanic languages lies at present in New Guinea and Melanesia, both because these languages are in an earlier and more primitive stage of growth, and because, with some few exceptions, they are very little known. The derivation of words must at present be very uncertain.

This paper will have done its work if it helps to point out to New Zealand students of language the wide and interesting field which lies close to them, at present but little explored.

ART. XLII.—*Notes on a Coal (?) from Boby's Creek, Waipara.*

By L. H. HARRISON, B.A.

Communicated by Professor Evans.

[Read before the Philosophical Institute of Canterbury, 3rd October, 1906.]

THE coal or shale herein described is of especial interest inasmuch as it carried on its surface both *free sulphur* and *calcium-sulphate*, and so appeared to illustrate a definite stage in the development of such shales. The calcium-sulphate crystals appeared in the form of large and well-developed rosettes, while the sulphur was scattered in small particles throughout the fissures in the coal, but only in small quantity.