

CHAPTER 14

MAN IN AUSTRALIA

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*Whatever hath been written shall remain,
Nor be erased nor written o'er again;
The unwritten only still belongs to thee,
Take heed, and ponder well what that shall be.*

—H. W. LONGFELLOW, *Morituri Salutamus*.

*Not around the inventors of new noise, but around the
inventors of new values, doth the world revolve; inaudibly it
revolveth.*

—F. NIETZSCHE, *Thus Spake Zarathustra*.

PART I: THE ABORIGINES

THE ABORIGINES' RACIAL HISTORY

As early as January 2, 1822, a paper on "The Aborigines of New Holland and Van Diemen's Land" was read before the six months' old Philosophical Society of Australia, the first scientific society in Australia and a forerunner of the Royal Society of New South Wales. The author was Barron Field, the Society's secretary. The object of his paper was "to exclude the Papuans, the New Hollanders, and the natives of Van Diemen's Land" from "the Malayan variety of the human species", with which the eminent German physical anthropologist, Professor J. F. Blumenbach, had "confounded them".¹ Barron Field sought to place those three groups of native peoples "among the negroes of the Indian Archipelago". Quoting the English physician and ethnologist, Dr. J. C. Prichard, he calls the latter "the Papua or negro of the Grand Ocean", who, however, are distinguished from the African negro by their "physical conformation . . . and particularly the squareness of the head"—a distinction which "authorizes the supposition of the Papua being indigenous in these countries".² Blumenbach and Prichard had comparatively little material

¹ Actually Blumenbach used the term *Malayan* largely in a geographical sense, and because most of the peoples in the region spoke Malay (Malayo-Polynesian, to use a later linguistic classification). But he added that the people of the southern Pacific graduated away insensibly towards the Ethiopian (Negroid) variety, and in a book, *Contributions to Natural History* (1806), he said that the "black Papuans in New Holland (Australia) might be separated as a sub-variety from the Otaheitans and other Islanders". Thus, Blumenbach had hardly "confounded" the Australians and Papuans with Malays.

² "The Aborigines of New Holland and Van Diemen's Land", by Barron Field. In *Geographical Memoirs of New South Wales*, edited by Barron Field, London, 1825, pp. 195-229.

to work on and had not visited the region. As an offset to this, Prichard chose to practise his medical profession in Bristol so that he could visit the docks to see and talk with sailors from many countries. As these, unfortunately, did not include Papuans and Australian Aborigines, he had no first hand means of checking the erroneous impression that "squareness of the head" was their general characteristic. But the supposition that the indigenous peoples of New Guinea, Australia and Tasmania belong to one "geographical race", differentiated in the region, was to be put forward a century and more later.³

Sixty-seven years after the delivery of Barron Field's paper, the Royal Society of New South Wales awarded (in 1889) its Medal and Money Prize to John Mathew for his "communication" on "The Aborigines of Australia". Revised and elaborated, this was published in 1889 as a book, *Eaglehawk and Crow: A Study of the Australian Aborigines*. In it, partly on physical observations, but mainly on linguistic and cultural grounds, Mathew put forward a di-hybrid theory of the racial make-up of the Aborigines in general, and a tri-hybrid theory for those in the north. In 1910, Mr. Mathew supported his thesis in the first Chapter of his book *Two Representative Tribes of Queensland: with an Inquiry concerning the Origin of the Australian Race*. He summarized the opinions of experts in physical anthropology, of whom at least Topinard, Flower and Lydekker considered the Aborigines to be a hybrid race. Mathew's theory was that "Australia, New Guinea and Melanesia were originally inhabited by one and the same race which was represented in its most primitive form by the Tasmanians". In other words, Australia was first inhabited by a Tasmanoid race, whom he classified with the Papuans proper and the Melanesians under the general term Papuasians. The Papuasians, in their turn, "may have emerged from a negrito stock". They reached Tasmania at a period when that island was still part of the mainland or else was "more easily accessible from it than in historic times".

At a later period, according to John Mathew, while Australia was still joined to the islands on the north or only separated by narrow water spaces, another race reached the northern shores, most likely in the north-east, who were "akin perhaps to the Dravidians of India, the Veddahs of Ceylon and the Toalas of the Celebes", but not necessarily derived from any of these lands. This stock is often referred to as pre-Dravidian. They gradually absorbed or exterminated the earlier, darker, shorter and woolly-haired natives. Thus, on this view, the

³J. F. Blumenbach, *De generis humani varietate nativa*, Gottingen, 1775. *Treatises of Johann Friedrich Blumenbach*, translated by Thomas Bendyshe for the Anthropological Society of London, 1865. J. C. Prichard, *De humani generis varietate*, 1808; *Researches into the Physical History of Man*, 1813 (first edition); later editions 1826, 1836-1847, 1851 (posthumous).

Australian Aborigines, as seen by the first European explorers and settlers, were a hybrid race of Papuan (or Tasmanoid) and pre-Dravidian stocks.

Further, Mathew considered that there had been "a comparatively recent, slight infusion of Malay blood in the northern half of Australia". His strongest ground for this view was the long contact of fishing fleets from the coasts, which he assumed would have resulted in some miscegenation as well as in linguistic and cultural influences.

Thus, for part of Australia, Mathew suggested a tri-hybrid theory. An earlier tri-hybrid view was put forward by Dr. A. Lesson in 1880. On the basis of craniometry and of an analysis of the literature, Lesson, a physician in French Oceania, concluded that the first race in Australia was Negrito; it reached Tasmania, though not without some admixture with the second race. The latter had all the characters of what used to be termed the Papua, namely, a narrow head, small cranium, prognathism, black skin and black wavy or frizzly hair. The third was a tall, robust people with long hair, straight and smooth features, and skin colour varying from chocolate to deep copper. Lesson called them the Alfourous, and said they were direct descendants of Polynesians who, migrating west, mixed in New Guinea and elsewhere with black populations, lost their own language, and gave rise to various Malaysian peoples. He found no link between the Australian and any Indian or other Asian people.⁴

On the other hand, the French anthropologist, Paul Topinard, considered (*L'Anthropologie*, 1876) "that the Australians might well be the result of the cross between one race with smooth hair from some other place, and a really Negro and autochthonous race". The former, as T. H. Huxley maintained, was of the same stock as the "ancient inhabitants of the Deccan" (India). The latter was Melanesian ("or, if you will", New Hebridean and New Caledonian). In addition, from his study of skulls, Topinard was certain that Polynesians and Malays had landed at some period in the north. Here was the making of a tri-hybrid theory, but at that point Topinard hesitated for want of sufficient information. This much, however, was clear. Some characteristics did approximate Aborigines to the Negro, whereas others, particularly hair form, marked them off as a distinct type. Moreover, "their stature would be sufficient of itself to prove" that they were "composed of two ancient races". Further, the evidence Topinard possessed convinced him not only that some hill-tribes of southern

⁴A. Lesson, *Les Polynesiens*, four volumes; Vol. I for the Australian reference. A. R. Wallace, *The Malay Archipelago*, p. 316, regards the Alfuros as the true indigenes of Gilolo, as predominant in Ceram, and of Papuan race, though with some Malay intermixture. For Lesson (Vol. IV) the Polynesians were people differentiated in Oceania—in New Zealand in fact.

India and the Veddas of Ceylon belonged to the same race as the Australians, but also that "among certain of the Ainos (Ainu of northern Japan), two fundamental Australian traits" were met with: "the very projecting superciliary arch and the abundant hair over the whole body".⁵ This reference to the Ainu is of especial interest in the light of the most recent tri-hybrid theory of the Australians, that propounded by Professor J. B. Birdsell.

In 1901, Dr. A. Carroll, founder of the Royal Anthropological Society of Australasia, of which the Governor-General and the State Governors were patrons, wrote an article in the Society's Journal, *Science of Man*, on "the different race types found among the Australian Blacks". They were the Negrito, the Papuan and the Dravidian. Through reversion these three types are revealed, at least in extreme cases: the Negrito in the shorter stature, rounder and shorter heads and flatter curly hair; the Papuan in the long, narrow head, retreating forehead, narrow face and prognathous jaws; and the Dravidian in the taller stature, thinner body, mesocephalic cranium, wavy straighter hair and orthognathous face. The Negrito arrived first, followed by the Papuan with whom they mixed.⁶ The Dravidians came next and, mixing with the earlier mixture of Negrito and Papuan, formed the Australian race. They did not reach Tasmania, which, by then, had become separated from the mainland.⁷

It was natural that men of learning in a newly-settled country, even if not trained in zoology or anthropology (then a new science), should try to discover the constitution and origin of the indigenous population. It was just as natural that anthropologists on the other side of the world should be interested in the same problem. For the Aborigines had been apparently an isolated people for possibly thousands of years, probably a survival from very early human times, and had been seen only briefly by European adventurers and explorers such as Dampier in 1688 and Cook in 1770. These scholars, however, were handicapped by not having sufficient skeletal material, especially skulls, from different regions of Australia and by not being able themselves, for want of opportunity or of training, to do actual field work in physical anthropology amongst the Aborigines, Papuans and other races in the region. Further, they tended in some cases to rely too much

⁵ P. Topinard (English translation), *Anthropology*, 1878, pp. 501-505.

⁶ This mixed race made its way over dry land to Tasmania, and became its Aborigines. This reflects Lesson's theory.

⁷ *The Science of Man*, Vol. 4, No. 4, June, 1901, pp. 85-86. By modern standards, this Royal Anthropological Society (1895-1913) was more prestigious than scientific. But the Journal was a means of preserving contributions on Aboriginal languages and customs made by amateurs (settlers and officials), and for every bit of information on the full-blood Aborigines of south-eastern Australia in particular, anthropologists of the 1960's are thankful. The Society did not long survive Dr. Carroll's death.

on cultural and linguistic data as evidence of race-relations and race-movements. Linguistic data, carefully used, can be useful in this connection, but customs, ritual and even material equipment spread from people to people without involving necessarily a movement of peoples.

Conditions of, and training for research, however, and a deepening understanding of the problems of racial origins and migrations changed radically in this, the twentieth, century especially after World War I. The results so obtained have not yet proved that the trend of what we might call the pre-statistical era was in the wrong direction.

Thus, Professor Fenner in 1939 put forward a tri-hybrid theory that the Australian Aborigines resulted from the mixing of Tasmanoid, Australoid and, later, in the north-east, Papuan races. Other modern scientists saw the Aborigines as a result of the fusion of a frizzly-haired Tasmanoid and later Australoid elements.⁸

The latest and best authenticated presentation of a tri-hybrid theory of the Australian Aborigines has been made by Professor J. B. Birdsell of California, based on fieldwork in 1938 and 1939, substantiated by further fieldwork in 1953-1954. His conclusion is that metrical, indicial and morphological data "demonstrate the existence among the Aborigines of marked regional differences culminating in three polar types of populations". He allows that such could arise "primarily from both adaptedness through natural selection and through the hybridizing of peoples, whose basic adaptedness" had been attained earlier elsewhere. In his view, however, hybridization is the more likely explanation. The Negritos, or Tasmanoids, were the first people to enter Australia, by way of a land-bridge (the Sahul Shelf) which existed between northern Australia and the islands on its north. They crossed by land into Tasmania. Professor Birdsell is satisfied that a number of small tribes, who still remained in 1938-1939 in the rain-forest area of the Atherton Tableland, north Queensland, exhibited, in spite of miscegenation, Negritoid characters approximating "the traits of the extinct Tasmanians". Later, in the same general geological period, a people he calls Murrayian because they are best exemplified by Aborigines in the Murray River region, moved south into and over the continent. Among living peoples outside of Australia, the Ainu of northern Japan "are clearly related to them". Thirdly and lastly came the Carpentarians, so called because they were especially evident

⁸ F. J. Fenner, "The Australian Aboriginal Skull: Its Non-Metrical Morphological Characters", *Trans. Royal Society of South Australia*, Vol. 63, 1939, pp. 248-306; K. Wagner, "The Craniology of the Oceanic Races", *Skrifter Utgitt ar Det Norske Videnskaps-Akademii Oslo I Mat-Natura*, Klasse, No. 2, 1937, pp. 1-193. Earlier, G. Sergi, "Tasmaniani e Australian", *Riv. di Antropologia*, Vol. 18, 1913, pp. 111-163, saw the Aborigines as resulting from Polynesians infiltrating into a Tasmanoid population.

in the Gulf of Carpentaria region when Birdsell was making his survey. He regards them as the Australoids proper, who, for the present, may be held to be related to the "basic substratum" in the population in India, the pre-Dravidians of other writers. But much more knowledge of Indian pre-history is required before this relationship can be evaluated. All three migrations were from the Asian mainland during the fourth glacial period, and possibly the two later peoples obtained their markedly primitive traits through miscegenation with an early form of man, *Homo soloensis*, who dates back in Java 30,000 years and more.

This theory of the pre-European populating of Australia, though put forward tentatively, and yet with confidence, is not only well documented, but also focusses in a fascinating manner the many preceding mixed-race theories of the constitution of the Aborigines.⁹

One reason for early thinkers being receptive to at least a di-hybrid theory was the Tasmanian race with its corkscrew type of hair and other features suggestive of Negritoid affiliation. The Tasmanians could have reached their island without passing through Australia, that is, by canoes either blown or drifted out of their course, or by skirting the eastern mainland. But it seemed more likely that they would have occupied the continent on their migration south, a migration which received impetus from other human waves behind them.

In spite of this, a number of scholars have considered, and still consider, the Australian a racially homogeneous population. Thus, W. Turner came to this conclusion in his "Report on the Human Crania and Other Bones of Skeletons Collected during the Voyage of H.M.S. *Challenger* in the Years 1873-1876. Part I—The Crania". Sir Arthur Keith went further; for him the aboriginal Australian "is an ancient and generalized type of humanity who 'has apparently retained the characters' of the common ancestor of the African and the European races, without being the direct ancestor of either".¹⁰

⁹ J. B. Birdsell, "Preliminary Data on the Tri-hybrid Origin of the Australian Aborigines", *Archaeology and Physical Anthropology in Oceania*, Vol. 2, No. 2, 1967, pp. 100-155. A recent worker (Bin Yamaguchi, *A Comparative Osteological Study of the Ainu and the Australian Aborigines*, especially pp. 27-32), however, would not agree that the Ainu "are clearly related to" the Murrayian Aborigines. They may be related only in the sense of being derived from a generalized Upper Paleolithic or Mesolithic common population in Asia, "such as are represented so far by Wadjuk skulls from Java, the Choukoutien remains from North China", etc., "but were diversified later by different population history". In more detail: the Ainu and the Australian Aborigines did not belong to the same primary inter-racial cluster. But some of the less Australoid skulls in the Aborigines bear remarkable resemblance to the older cranial type of the Ainu. Yamaguchi even suggests that the Australian Aborigines may be more closely related to the Melanesians than to the Ainu or the Polynesians.

¹⁰ A. Keith, *Antiquity of Man*, 2nd edition, 1925, pp. 712-3. Keith thought, too, p. 719, that the Mongolian type would also be found to verge towards an ancestral stock from which the Australian, European and Negroid types have sprung.

Present-day physical anthropologists who hold this view in one form or another include W. W. Howells (Harvard University), A. A. Abbie (University of Adelaide) and N. W. G. Macintosh (University of Sydney). The first analysed the measurements made by field-workers on Aborigines in Arnhem Land, in central and north-central Australia and in a few other regions. He concluded first that the Aborigines were remarkably homogeneous in physical type; secondly, that they were a "major race which represents an earlier stage in the development of *Homo Sapiens* than does any other existing race"; and, thirdly, that representatives of this race, the Australoid, mixed with other strains, are to be found in Tasmania, New Caledonia, New Ireland, New Britain, Ceylon and "possibly also in Southern India and some of the lesser Sunda Islands". Further, Professor Howells considered that the Australoids originated in Asia, "perhaps in India", and spread into the Western Pacific, but that outside Australia they were "extinguished or submerged everywhere except in a few marginal regions".¹¹

Professor Abbie, on the basis of a large amount of non-metrical observations and of anthropological measurements of Aborigines in South Australia, Central Australia and Arnhem Land, claims that, in general terms, the physical homogeneity of the Aborigines has been established right across the continent from south to north. He further maintains that "there appears to be no necessity to postulate separate invasions by different peoples to account for the physical differences displayed in different parts of the country. Such differences can all be readily encompassed by known biological processes".¹²

For his part, Professor N. W. G. Macintosh, who has studied the living Aborigines in the field, and also crania and other skeletal remains, concluded (in 1965) that Australian Aborigines "constitute one basic pattern", which was already "somewhat hybridized in their Javan or Wallacean homeland" and that they came south in relatively small migrant bands "possibly no earlier than the latter part of the Fourth Glacial" epoch. In his view (as expressed in 1952), theories of homogeneity for the Aborigines have greater validity than those of multiple origins: but, even so, he insists that while the Aborigines are not modern hybrids, they are ancient ones, "and in the modern sense they are a

¹¹ W. W. Howells, *Anthropometry of the Natives of Arnhem Land and the Australian Race Problem*, Peabody Museum (Harvard University) Papers, Vol. XVI, No. 1, 1937, pp. 1-97, especially pp. 77-8.

¹² A. A. Abbie, "Physical Characteristics of Australian Aborigines", in *Australian Aboriginal Studies*, A Symposium of Papers; W. E. H. Stanner, Convenor; Helen Sheils, Editor, 1963, p. 100. *Idem*, "The Australian Aborigine", *Oceania*, Vol. 22, No. 2, 1951, pp. 91-100, especially p. 96.

homogeneous people but possessing a gene pool with a wide range of variation".¹³

Many individuals among the hill tribes of southern India strongly suggest affinity with the Australoids. On the basis of observations and selected comparative measurements, some scholars have held that Australoids were a component in the early population of southern India, and, indeed, that they were possibly differentiated there or elsewhere in south Asia. This view, however, is now regarded somewhat tentatively. We wait for archaeology to reveal the links, if there be such.

In the meantime, our attention has been turned to the Malaysian Archipelago and to Australia itself. Significant series of fossilized human remains have been found in these related regions since the 1880's. From Java have come several specimens of *Pithecanthropus* (*Homo erectus*), a very early and primitive human type; of Solo man (*Homo soloensis*), a type similar and parallel to the Neanderthal human species which lived in Europe and south-west Asia for a long period up to about 20,000 B.C.; and Wadjak man (*Homo wadjakensis*), an Australoid type. The significant Australian finds have been: (1) the cranium of the Talgai youth from the Darling Downs of Queensland, dated about 10,000 years, "which in its external form and structure is more primitive than any other Aboriginal" cranium so far known; (2) Mossgiel skull and skeleton from south-western New South Wales, which is at least 4,625 years old; the skull is remarkably similar to the Solo River series in Java, which is dated about 30,000 B.C.; (3) a cranium from the neighbourhood of Cohuna in Victoria, a few miles south of the Murray River; it is characterized by heavy eyebrow ridges, marked projection of the face and mouth, a very retreating Pithecanthropian forehead, and teeth and palate definitely Aboriginal, but much larger than average; its age is uncertain, but may be considerably greater than 5,000 years; (4) a cranium from Keilor near Melbourne, Victoria, dating back 8,500 years or perhaps more; it is modern looking and almost identical with the Wadjak series of crania from Java. This suggests that Wadjak had the same ancestry as Keilor and modern Aborigines; (5) the Tartangan skeletal remains from the Devon Downs rock shelter on the lower Murray, South Australia, with an antiquity of about 5,000 years; although the individuals represented are all infants and juveniles, they all show some exceptionally large, rugged or primitive features; these traits can be matched individually in present-

¹³ N. W. G. Macintosh, "Stature in Some Aboriginal Tribes in South-west Arnhem Land", *Oceania*, Vol. 22, No. 3, 1952, pp. 208-215. *Ibid.*, "The Physical Aspect of Man in Australia", in *Aboriginal Man in Australia*, 1965, edited by R. M. and C. H. Berndt, pp. 29-70, especially p. 64.

day Aborigines, but "their collective presence in any one skull is, to say the least, unusual" (Macintosh).

Possibly, if we could look back into Talgai-Cohuna-Tartangan times from the Darling Downs to the Murray, we would see many, perhaps the great majority of, Aborigines with low sloping foreheads and, to our eyes, rather ugly projecting faces and mouths—features sometimes seen in modern Aborigines. What future archaeological finds will reveal, we do not know, but so far no Tasmanian traits are present in any of these "ancient" specimens, and, quite significantly, the differences between the latter and the Aborigines of to-day in *their* variety are not great. As Professor Macintosh writes: "Aboriginal cranial form has remained surprisingly constant during the last 10,000 years", though we can see a sequence in the form and structure from "Talgai at the more primitive extreme, through Mossgiel (tentatively), Cohuna, Tartanga and, finally, the most modern looking, Keilor".

Clearly, too, the equivalences of Mossgiel to Solo man and of Keilor to Wadjak man, and the Pithecanthropian hints in Talgai and Cohuna point to the Malaysian Archipelago as the differentiation-region for the Australoids, from which they moved south towards Australia, and also south-east, if the evidence for them in New Britain, New Ireland and New Caledonia be sustained. In addition, groups of them could have migrated north, eventually reaching India and Ceylon.

The main point involved in this view, even if other migrations of human types entered the archipelago from the Asian mainland, is that the Australoids were a geographical race, locally evolved from a very early human type, such as Pithecanthropus of Java, with Solo man and Wadjak man representing phases in the process. Further, Pithecanthropus was one of a widespread species (*Homo erectus*) which included an earlier variety, *Homo erectus robustus*, from Djetis in Java as well as Pithecanthropus from Trinil; Lantian, Choukoutien and Peking varieties in China; Swartkrans (*capensis*) in South Africa; Ternifine (*mauritanicus*) in Algeria; and *habilis* and *leakeyi* varieties at Olduvai in Tanzania, East Africa.^{14, 15}

¹⁴ F. Clark Howell, "European and Northwest African Middle Pleistocene Hominids", *Current Anthropology*, Vol. 1, No. 3, 1960, pp. 195-228; Woo Ju-kang, "The Skull of Lantian Man", *Ibid.*, Vol. No. 7, No. 1, 1966, pp. 83-86. If Solo man, as is suggested, be included in this early species as *H. erectus soloensis*, the problem arises of his survival for hundreds of thousands of years beyond the other varieties of the species. W. W. Howells, "Homo Erectus", *Scientific American*, November, 1966, pp. 46-53.

¹⁵ N. W. G. Macintosh, "The Physical Aspect of Man in Australia", in *Aboriginal Man in Australia*, 1965, pp. 30-70; A. P. Elkin, *The Australian Aborigines: How to Understand Them*, 4th edition, 1964, pp. 18-24; R. Ruggles Gates, *Human Ancestry*, 1948, pp. 144-163; F. Weidenreich, "Giant Early Man from Java and South China", *Anth. Pap. Amer. Mus. Nat. Hist.*, No. 40, 1945, pp. 1-134.

THE ABORIGINES OCCUPY AUSTRALIA

As a result of systematic archaeological research in Australia and of recent physical (radio-carbon) and chemical techniques which supplement the established geological methods for dating finds, we are penetrating the antiquity of the Aborigines in this continent. A site 250 miles north-east of Charleville, Queensland, excavated to a depth of ten feet was occupied for 16,000 years, and a date of 16,800 B.C. has been reported for what was judged to be an Aboriginal fire-heap at Lake Menindee in the south-west of New South Wales. Further, occupation of the lower Murray, South Australia, and of Port Phillip district (Victoria) go back about 9,000 years.

Thus, some at least of the Australoid migrating groups must have reached what became the northern shores of the continent more than 18,000 years ago. At that period, Australia was connected on the north to New Guinea and other islands west to Timor by the Sahul Shelf. The only water spaces the migrants had to cross were the two straits known as Wallace's and Weber's lines, which were not formidable barriers, even for the simplest craft. No doubt, some traces of their occupation, in the form of simple stone implements, still remain buried on the now submerged Sahul Shelf.

This southward spread of Australoids was a comparatively slow process in which small food-gathering bands were involved. It would have been much slower if they had been gardeners in fertile regions able to produce food to sustain considerable increases in numbers in settled localities, as with the Papuans in New Guinea. We have no reason, however, for thinking that the Aborigines were ever other than food-gatherers and hunters. Certainly, they would be nothing else once in the Australia we know: a land of annual, long dry seasons in the north; of recurring droughts elsewhere; of vast areas of poor soil or sandy wastes; and of plants adapted, except in a few isolated regions, to an arid world, none of which Europeans have considered worth cultivating.

Further, the very nature of their food-getting economy meant that the groups were small, possibly of twenty to fifty individuals each, and separated in space. It also meant that the first requisite for each migrating group was permanent fresh water around which its members could obtain food without going beyond what might be called the "range of thirst". Only in especially well-watered regions or during a rainy season could the hunter venture further. In time, too, the range became limited by another factor—the food-gathering and hunting forays of other groups.

The basic cause for pushing out beyond the food-quest range was the inadequate supply of available food, mainly the result of the

increase in numbers. Clearly, the enlarged group did not, like a locust plague, eat out their accustomed area and then push on, probably to do the same in area after area. Rather, a section of the group hived off to settle around another water place, perhaps thirty of fifty or more miles away, according to the geographical conditions. In time, with natural increase, the same hiving-off process was repeated, until the whole continent was occupied, comparatively densely in some fertile coastal or river regions, but very sparsely in arid regions.

Archaeological research will throw light on the routes of this hiving-off process, and so too will linguistic research. The many languages, totalling over seven hundred, in spite of differences in grammatical structure and in vocabularies, belong to one family. Moreover, a "common Australian" has been detected; and the survival incidence of the elements of this might well indicate direction of the spread of groups. In addition, attempts are being made to calculate (by glotto-chronology) the time taken for the development of changes in vocabularies.

In any case, in spite of some climatic and geographical changes which have occurred in human times, especially in the Lake Eyre region, we can be fairly sure of the migration routes. These would lie obviously over the northern and eastern coastal regions, and their river-systems; along the corridors south from the Gulf of Carpentaria up the Flinders and Leichhardt Rivers and on to the Diamantina and Cooper and so to the region of the Great Lake of early times, when the central-north and north-east of South Australia was still a lush country occupied by large marsupials. Another complex of routes was reached by following up rivers of Queensland's east coast and entering the headwaters of the Barwon and the Warrego, leading in to the great Darling-Murray River system. On the west of the continent, as seasons permitted, hiving-off groups, inured to arid conditions, spread down to the rich south-west corner, and also inland up the river courses to the deserts. Whether Central Australia was reached from the north or north-west or, as might well have happened, from the Lake Region to the south-east, has yet to be determined. These geographically suggested corridors of occupation are indicated also, as might be expected, by the routes followed by mythological heroes, and by "trade routes" along which social customs and rituals, as well as natural substances and artifacts, used to pass.

The occupation of Australia possibly took only a thousand or so years, but we cannot determine the period without knowing how many groups came to Australia, what size they were, whether they practised infanticide and to what average age individuals lived. But by analysing all reports of numbers from the first days of settlement onwards, and

by taking into account the ecological conditions, we have calculated that in 1788 there were about 300,000 Aborigines in Australia. Moreover, this could have been the figure for thousands of years.

PART II: ABORIGINAL AND EUROPEAN OCCUPATION—A COMPARISON

A total of 300,000 may seem a very small population for a continent the size of Australia, but it is not really so. Aboriginal economy was based solely on food-gathering and hunting, that is, on what nature produced unaided by cultivating and fertilizing the soil.

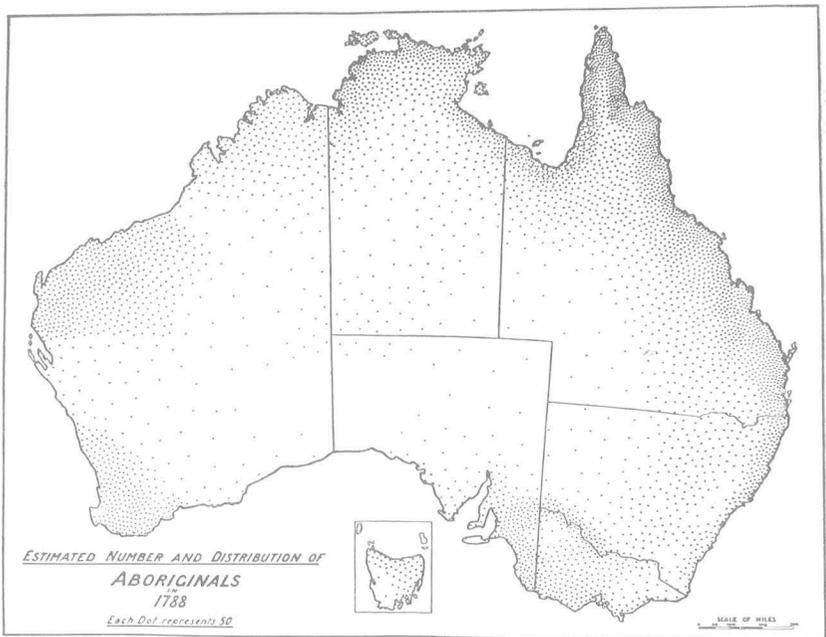


PLATE I.

Such an economy requires a much larger area per person than does one based on gardening or farming. Further, two-thirds of the continent is desert, arid or semi-arid, while even the better and good regions, let alone the semi-arid pastoral areas, from time to time are subject now, and have been subject in Aboriginal times, to disastrous droughts during which all plant and animal life is diminished, including, in these days, cattle and sheep and crops introduced by the white man.

The Aboriginal total was the result of natural adaptation evolved over millenia, through good and bad times, in fertile and in arid regions. It was also the result of intelligent adaptation based on slowly acquired knowledge of all sources of food and water in each group's country,

together with skill in exploiting these sources. Some idea of the adequate occupation by the Aborigines of the continent is gained by comparing it with the European occupation after 160 and more years, remembering that the latter implies the introduction of suitable crops and animals, the use of the advanced techniques of Western civilization, and the development of secondary industries. The striking fact is that maps plotted to show the distribution of the two peoples show a remarkable similarity.

Where the European population is dense, where farming (including wheat- and rice-growing) and intensive pasturage

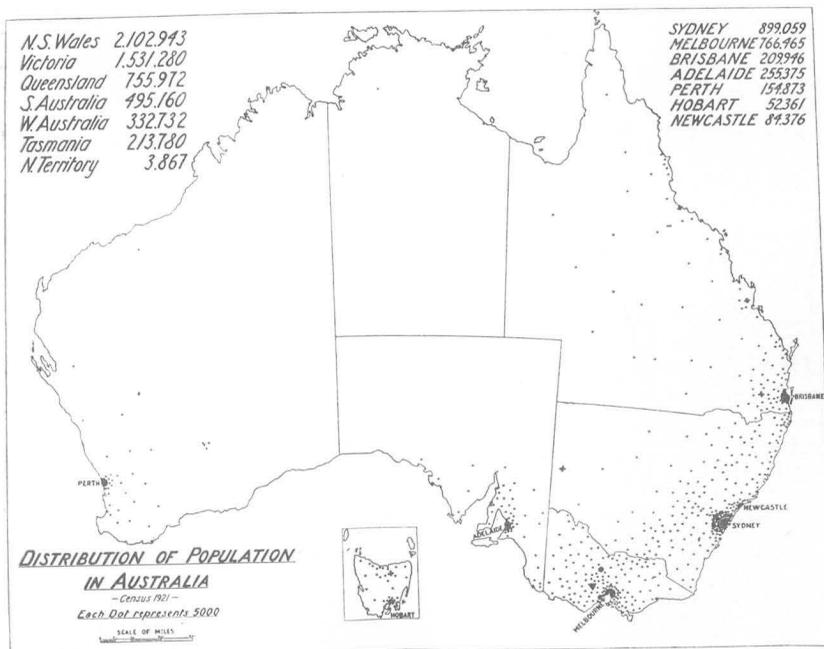


PLATE II.

(including for beef and dairy cattle) have proved successful, and where secondary industries have been developed, includes regions where the Aboriginal population was dense. For the Europeans, this is the coast and hinterlands and inland slopes from about Cairns in the north-east, down and around through Victoria, the Murray Valley and the south-east of South Australia to Spencer's Gulf; and the south-western corner of Western Australia northward to about Geraldton. Indeed, thirty years ago, no town of over one thousand persons was situated much beyond two hundred miles in a direct line inland from the Australian coasts, and even now such towns are very few, being important distribution centres like Bourke (New South Wales),

Charleville and Longreach (Queensland) and Alice Springs (in the Centre). Further, the increase of over four million in population since World War II has been almost solely in the coastal regions—principally in metropolitan and urban areas where 80% of the population lives.

Outside this two-hundred-mile-wide closely settled fringe, which, however, does not include the northern and north-western coasts, nor the Bight region in the south, is a region of both uncertain and also low average rainfall (15 inches and under). It is at best capable of sparse pastoral occupation, and the possibilities of irrigation are limited.

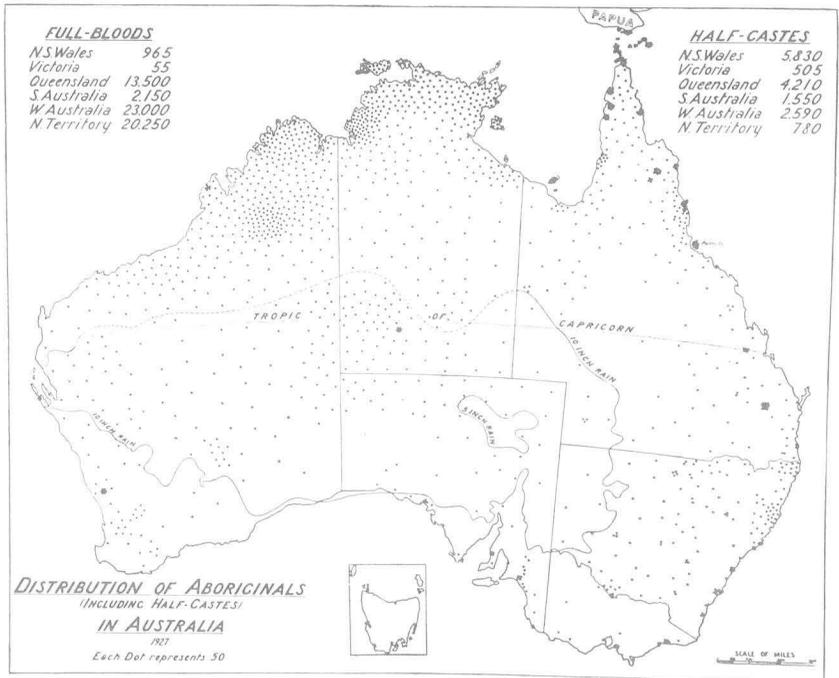
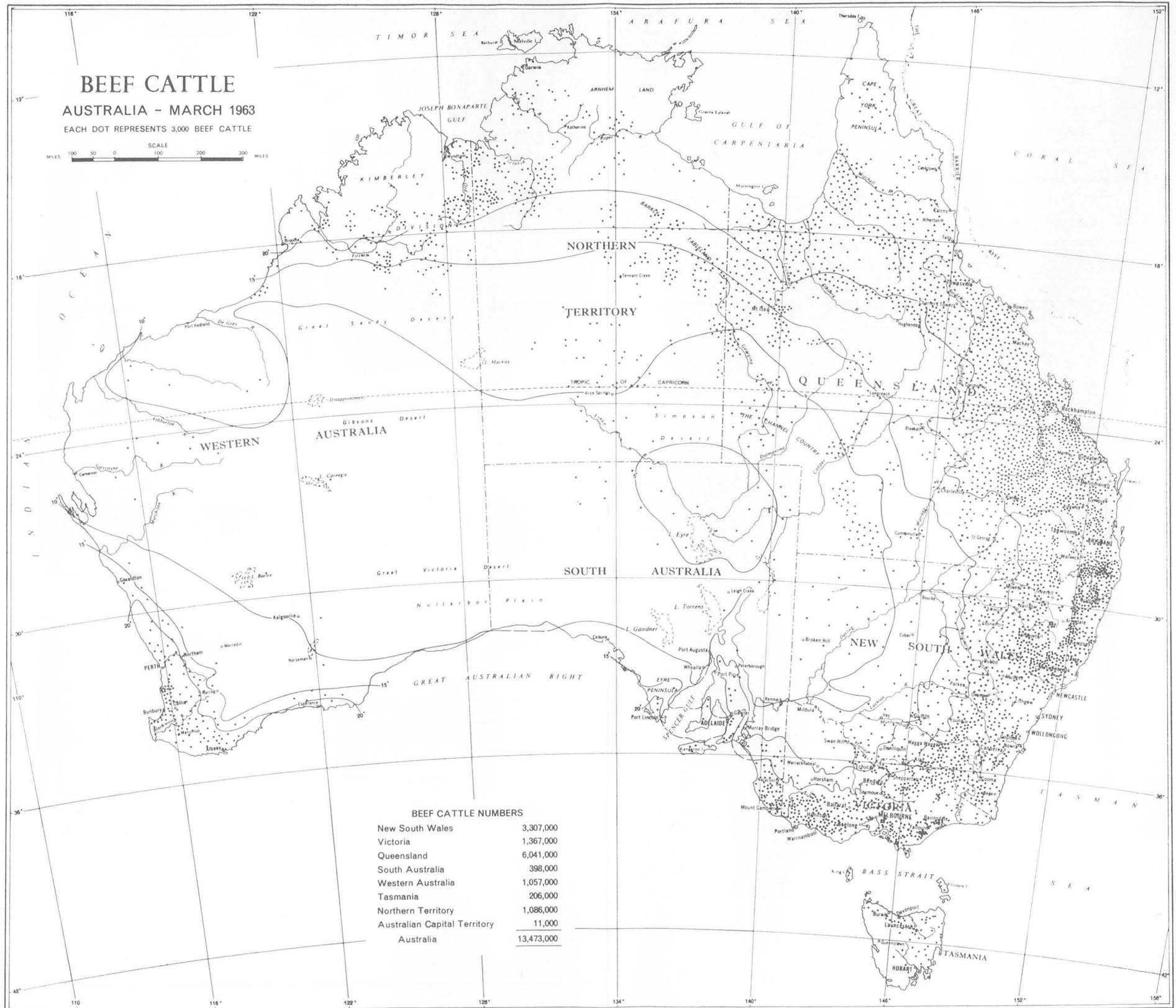


PLATE III.

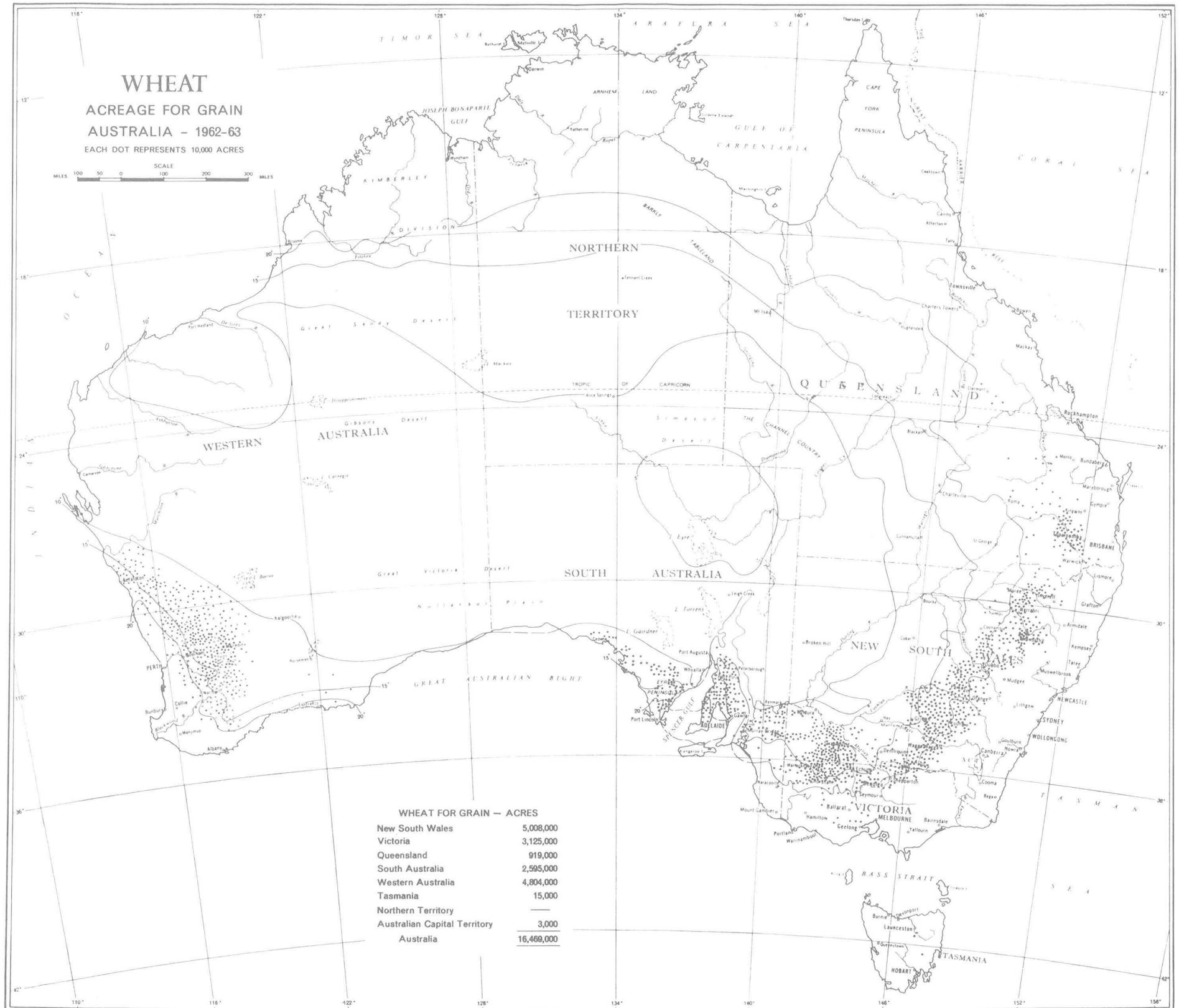
The European population is sparse and so, too, was the Aboriginal. This is the region where, in the dry seasons and droughts, the Aboriginal groups were isolated from each other for months at a stretch.

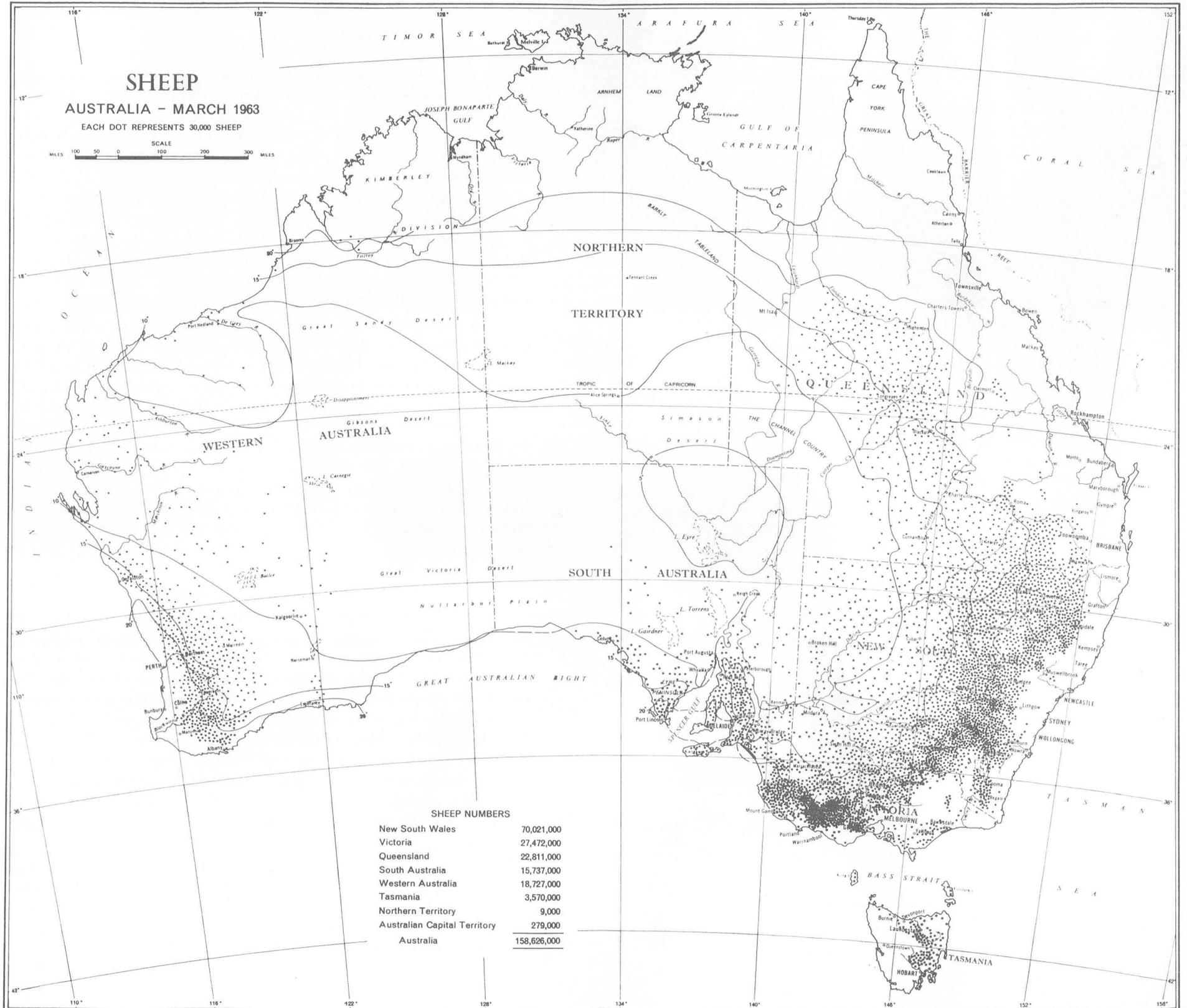
THE CENTRAL REGION

One interesting example of the similarity of occupation by Europeans and Aborigines is the region of the Finke River system and the MacDonnell Ranges, where the average yearly rainfall is from ten to eleven inches, as compared with an average of under five inches elsewhere in arid Australia. It is a comparative oasis, although it



MAP I.





MAP III.

suffers from time to time droughts of up to ten years' duration when stock losses are very serious. Here alone in the arid third of Australia, European settlement and the pastoral industry (mostly cattle) have become stabilized. This was the country of the large Aranda tribe, estimated to number 2,000, which was subdividing into four if not five sub-tribes, each with its own Aranda dialect. Here, too, is one of the few exceptions of towns exceeding one or two thousand more than two hundred miles from the coast. This is Alice Springs (6076), the terminus of the railway from Adelaide and of the highway from Darwin; the hub of the roads radiating out to the pastoral properties and to seven Aboriginal settlements and missions; and the centre of a much publicized tourist industry.

The white population of Alice Springs and district is much greater than the former Aboriginal population, but it is not living off the land. The bulk of the food (except beef) is brought in by train, road and air, and the resulting distribution of necessities (which for whites also includes clothes, "luxuries" and so on) accounts for a large proportion of the population, especially in Alice Springs. Further, the present stock-carrying capacity in 1965 of over 160,000 cattle and 7,000 sheep (in a fair season) distributed over sixty "stations" is much greater than it used to be because water is now stored in open dams or "tanks", and is also obtained by boring. Cattle, therefore, have more water centres around which to feed than did the marsupials and other creatures in the days when the Aborigines lived off the land.

THE ARID AND DESERT REGIONS

There are two types of environment, however, in which the Aborigines adapted and sustained themselves, but where Europeans have either not attempted to settle, or else have done so, but with, on the whole, unsatisfactory results. The first consists of the vast arid and desert regions where in the outer "ring" the average annual rainfall is from ten to six inches, and in the inner "ring" is under six inches. Such low rainfall, which is usually unreliable and irregular, combined with poor soil and the absence of running streams and permanent surface waters, has kept the white man and his herds at bay, as in the Nullarbor Plain and the large arid region of the interior of Western Australia and of the neighbouring areas of South and Central Australia.

This region, however, was "occupied" by Aborigines, though sparsely. Wells sunk between some sand-hills and in shallow water courses, and rockholes in isolated outcrops and ranges, formed centres in nomad and migration corridors. Around these, and from one to the next, small groups gathered lowly plant foods and insects, and hunted

marsupials and reptiles, and slowly over generations hived off in a generally southerly or south-easterly direction, looking for better country. When discovered by explorers and Government officers, these desert dwellers were not emaciated but in good physical condition. However, they were never numerous. The estimated number of 10,000, like the later 5,000 which used to be given in annual reports of the West Australian Department of Native Affairs, was eventually seen to be without foundation. It was written down to 2,000, and then omitted. The thousand, more or less, who were in this "moving" corridor, are now at missions in Western Australia or at Government settlements in the Northern Territory.

In some regions of low rainfall, in particular in north-eastern South Australia, the Aborigines adapted themselves more wisely than the European settlers have done. Enticed by the lower courses of the Diamantina and Cooper River systems, white men came with their flocks and herds, far too many of them for the dry periods when the expected flood waters did not come from north-coastal Queensland. So the pastoralists have suffered tremendous reverses; the earth has been rendered bare by starving cattle and sheep, and loose sandy soil has been blown by the winds on to the ever-lengthening sand ridges. This much is clear, that the number of Aborigines who lived in regions like north-eastern South Australia, obtaining ample food, and going about their social and religious affairs, far exceeded the number of Europeans who have lived there, or are likely to do so in the foreseeable future. The inference is that arid and semi-arid food-gathering and hunting regions cannot become the stage for settled, pastoral activity except at the risk of disturbing nature's balance. A sparse "nomadic" pastoral economy is another matter—that is, a string of pastoral properties, all understocked, directed by managers of quick decision, who will move their cattle or sheep from failing areas to favourable ones before the danger point is reached.

NORTHERN COASTAL REGIONS AND A COLLECTING ECONOMY

The other type of environment in which the general distribution of Aboriginal and European occupation does not coincide is found in the rugged northern coastal regions, namely, the Northern Kimberley and Arnhem Land, and, indeed, in the northern part of Cape York Peninsula also. These regions were populated comparatively densely by Aborigines. Fresh water was and is plentiful in rivers, billabongs and springs; and natural foods abound: plant, marsupial, reptile, insect, bird and fish.

Europeans, however, have only settled in two north-south corridors. These are first, the Ord River district with cattle stations,

meatworks at Wyndham, and now an important irrigation project for agriculture. The second is the Darwin-Katherine strip in which agricultural projects have been attempted, so far with little success, and where meat-works have been established at either end to deal with the export of beef from the pastoral stations east, west and south of Katherine. Apart from the latter inland township which, until a few years ago was a one-hotel village, there are only two other towns, both ports—Wyndham for the Ord, and Darwin which is also the administrative centre of the Northern Territory. As for the rest, the country is mostly rugged, the soil poor except in pockets, and the climate in the annual wet season very trying for Europeans. Consequently, it has not been regarded as economically worthwhile for agricultural or pastoral industries.

On the other hand, a few fields of profitable activity have been, or are, exploited in it. These are mining, buffalo and crocodile shooting (for skins) and pearl-shell fishing. So far, mining has been limited by the "space-time" conditions of the deposits, though thought is now being given to establishing some associated industries at the mines. Unless this be done, then in due time the present bustling activity will suddenly cease on Koolan Island (Yampi Sound, Northern Kimberley) and Frances Creek (south of Darwin) for iron ore; on Groote Eylandt for manganese, and at Gove (north-eastern Arnhem Land) and Weipa (in the far north of Cape York Peninsula) for bauxite. Like the ghost towns in the wake of gold-rushes, or like the uranium township of Rum Jungle, the well-furnished townships will become untenanted and silent almost overnight. Likewise, pearling fleets and the buffalo and crocodile shooters come and go; indeed, unless controlled, they may possibly "fish out" or shoot out the supplies. Even the crocodiles of the western Arnhem Land coast are said to be thinning out. In any case, these fishing and shooting pursuits have added very few to the population of the north, and those few have centred on port-towns.

The significant point is that the economically profitable activity of the northern coastal regions is based not on food production, but mainly on gathering (minerals and shell) and hunting for skins. This is a vindication of the Aborigines' food-gathering and hunting economy. Without any reliance on outside sources, they lived there in their thousands in a comparatively settled manner, organized in tribes and clans, and following definite social, economic and religious patterns. They had evolved an intelligent and knowledgeable adaptation to the environment.

On the other hand, miners, pearlers and shooters gather and hunt to make money with which to obtain from elsewhere their food, drink, clothes, dwellings and pleasures. So, too, the staff on the couple of

dozen missions and Government Aboriginal settlements must obtain almost all their supplies from outside the north.

The blunt fact is that the peculiar geographical environment of Australia had set almost the same ecological limits to its original food-gathering and hunting inhabitants as those which confront its later occupants in spite of their food-producing economy and greater technical skills. The main difference lies in the intensity of the white man's occupation and use of the fertile and reliable regions, and in his thorough, and indeed exterminating, exploitation of primary sources in the tropical north and in ruining the soil in the semi-arid, south-central and east-central regions.

PART III: EFFECT OF EUROPEAN SETTLEMENT ON THE ABORIGINES

In January, 1788, Governor Arthur Phillip landed at Port Jackson with about 1,000 persons, being convicts and staff. As many more arrived within a year and others soon followed, mostly convicts. The need, however, as Phillip pointed out to the home authorities, was for experienced farmers to till the land and so prevent periods of near starvation for the little colony. England, and even Capetown, as sources of supplies, were a long and risky way off in those days of sailing ships—small ships in our eyes. Some farmers were to come, but in the meantime, the Governor was authorized to assign convicts to persons willing to become free settlers. In 1891 and 1892, grants of land were made to some seamen and marines, to a superintendent of convicts and an assistant surgeon, and, on certain conditions, to about 40 time-expired convicts. Very few of these had ever done farming, but many of them tried hard. At any rate, Phillip wrote in October, 1792, that besides the cultivation of 1,300 acres on the public account in the Parramatta-Toongabbie-Prospect Hill district, settlers have 416 acres under cultivation and more cleared. Actually, 3,740 acres had by then been transferred to settlers, and Parramatta's population approached 2,000 at the end of 1792.¹⁶ By then, too, the Hawkesbury had been explored, and in 1794 successful farming was in progress there. By 1800 the total population was 5,547, 47,678 acres of land had been granted, and livestock (sheep, cattle, horses and goats) numbered 9,653. In 1808, a penal settlement (King's Town, the later Newcastle) was made at the mouth of the Hunter, primarily to mine the coal. But before long, cedar gangs pushed up the Paterson River

¹⁶ W. Tench, *Sydney's First Four Years*, Royal Australian Historical Society Reprint, 1961, pp. 244-259; D. Collins, *An Account of the English Colony in New South Wales*, edited by James Collier, pp. 163-4; C. H. M. Clark, *Select Documents in Australian History, 1788-1850*, pp. 60-5; A. W. Jose, *History of Australasia*, 1914, p. 23, says that in July, 1792, the Rosehill settlement had a population of 2,000, of whom 64 were farmers working their own land.

and in 1821, when the convict establishment had been moved to Port Macquarie, settlers began taking up land in the Hunter Valley. By 1830, 1,300,000 acres have been allotted to them. In that year, too, Port Macquarie ceased to be a penal institution and free settlement moved on to the Hastings and Macleay, and then to the Clarence, and when, in 1839, the convict establishment which had been placed at Moreton Bay in 1824 was closed, settlers moved there also. In the meantime, the Blue Mountains had been crossed in 1813, revealing excellent land. Explorers, settlers and squatters pushed out north and south and in all westerly directions. By 1850, 20 squatting districts had been proclaimed from Wide Bay in the north down to Port Phillip in the south.

This meant an increase of population. The 1,000 of 1788 had become 30,000 by 1819, 36,598 in 1828, and 77,000 in 1836—not quite fifty years after Governor Phillip's arrival. Ten years later it was 187,413, and in 1851 was almost the same number, without the Port Phillip district, which had just become a separate colony—Victoria—with a population of 78,260.

This region, however, had been fairly densely populated in parts by Aborigines, but in district after district, in a few years in each case, they were deprived of the unrestricted use of land on which for unnumbered generations they had gathered their food and moved freely for social and ritual purposes. They now found themselves to be trespassers in their own country. Moreover, they had nowhere to retreat to, for each group was bound to its own country by spiritual ties which preceded birth and would last through death. Clash, therefore, was inevitable. The early settlement at Port Jackson depended for its very existence on the crops from its farms, and every settlement and every farmer, settler and squatter in the years that followed, likewise required that his crops, flocks and herds should not be interfered with in any way by the movements and actions of nomadic Aborigines. The latter, however, had to seek food and meet their social and ritual obligations. They soon learned, however, that they could neither get rid of the newcomers nor take with impunity any of his crops or animals. Those who were not shot, became hangers-on to the white man's settlements. They were affected adversely by the unaccustomed sedentary life; their resistance to illness was lowered by unbalanced diet and alcohol; and they fell victims of diseases to which they had no immunity. As a result, their numbers declined very quickly, and in twenty or so years only remnants remained.

This process was repeated in every newly settled district: Swan River, 1829; Port Phillip, 1836 (unofficially in 1834); the Torrens (Adelaide), 1836; Port Essington, 1838, and places in between and

inland. This clash, pauperization and decline were just the logic of the situation. The official policy was one of friendship to, and conciliation of, British subjects, and attempts were made to give to Aborigines the blessings of Christianity and civilization. But contact and clash caught up with all these attempts, sincere though they were. Eventually, from the 1860's onward, protection policies were enacted at different periods in the several colonies, but all alike accepted the premise that the full-blood Aborigines were dying out. Therefore, all that could be done was to try officially to protect the remnants from injustice and harsh treatment, and to provide some social services for them. The decline continued until in the 1940's full-bloods were estimated to number well under 40,000.

Protection policies failed not only to prevent this decline, as was expected, but also to prevent clashes, atrocities and injustice. Protests were unavailing. However, a successful movement was made in the 1930's to institute positive policies of health, education, employment and welfare generally in the States and in the Northern Territory, based on the principle that the Aborigines need not die out. The new forward-looking concept was accepted and expressed in amendment of Acts and in changes in administration. A sign of this was the substitution of the terms Director, Superintendent, or Commissioner of Aboriginal Welfare in place of Chief Protector or Protection Board Secretary. Following World War II and the development of these policies aimed at the assimilation of Aborigines into full citizenship, the tide began to turn. This became noticeable in 1951, though by 1958, the ascertainable number of full-bloods was still under 40,000 (being 38,321). In 1966, however, the number, based not merely on the census, but also on the enumeration by officers of all the welfare departments concerned, was just over 45,000. The increase is very marked in the Northern Territory, where the present number of 20,000 is estimated to reach 34,000 by the end of the century; but it is present everywhere except in Victoria, where there are no full-bloods, and in New South Wales, where there are only 130 scattered here and there and too few to avoid miscegenation with mixed-bloods or with Europeans.¹⁷

Part-Aborigines are also increasing. Figures provided by the welfare departments show that the enumerated and estimated number

¹⁷ The official Commonwealth Census, 1966, gives 2,755. This figure must include individuals who gave their race as three-quarter caste, and also some who simply gave Aboriginal, as some half- and lighter castes do. This trend is growing, e.g., the increase from 1,488 (Census 1961) to 2,755 (Census 1966) in New South Wales where only 130 full-bloods are known; and from 253 (1961) to 314 (1966) in Victoria, where, according to the Aboriginal Department's Welfare Officers, there are none. Social identification is being equated to race identity.

has risen from 52,857 in 1958 to almost 77,000 in 1966. Neither figure necessarily includes all persons with some degree of Aboriginal ancestry, such as those who are not noticeably Aboriginal, those who do not record themselves as part-Aboriginal, and those who have no contact with Aboriginal departments.

In any case, all persons of whatever degree of Aboriginal descent have the franchise and the right to all Social Service benefits. In addition, since the Referendum of 1967, full-bloods will be not only counted at census times, but also included in the total population of the Commonwealth. Moreover, it will be possible to do this from now on with a degree of accuracy which has not been possible previously. There are probably very few, if any, Aborigines not in touch with stations and missions, where they are known as individuals.

This increase of Aborigines, especially of the full-bloods, poses a serious problem. Unless they are integrated into the economic structure of Australia they will not only remain a charge on welfare departments, but will eventually be a discontented minority. The basic difficulty is that their increase is in those regions of the continent which are least developed and which almost seem to defy development. Moreover, a couple of generations at least will pass before the Aborigines in them are likely to uproot themselves or agree to migrate to coastal regions, or, indeed, be welcomed in these. Herein lies a challenge to scientific research, to industrial initiative and venturesomeness, and to Government cooperation and sense of mission. Pipe lines and railway lines hundreds of miles long would be provided to any proved source of minerals in the most arid regions, so that men and their families could live on the spot and the mineral wealth be extracted. So ways must be found to bring water, after treatment if necessary, to soils in those same and other regions that are of potential use; and there and elsewhere in the vacant places, primary and secondary industries must be developed which will be capable of absorbing an indigenous people who are psychologically and physically adapted to the environment.

PART IV: EUROPEANS IN AUSTRALIA

EUROPEAN POPULATION TO 1850

New South Wales started as a convict settlement, but in prophetic mood, Governor Phillip looked beyond to the rise of a colony of the free, just as did Sir Joseph Banks, who, writing to Phillip's successor, Governor Hunter, in the dark European days at the end of the eighteenth century, said: "I see the future prospect of empire and dominion which now cannot be disappointed. Who knows but England

Aboriginal Population Distribution 1966

	Abori- gines	Part Abori- gines	Torras Strait Islanders	Total
QLD.	12,000	29,700	8,000	49,700
N.T.	20,120	4,000		24,120
W.A.	9,905	11,985		21,890
S.A.	3,128	4,632		7,760
VIC.		3,500		3,500
N.S.W.	130	23,000		23,130
Totals	44,605	77,495	8,000	130,100

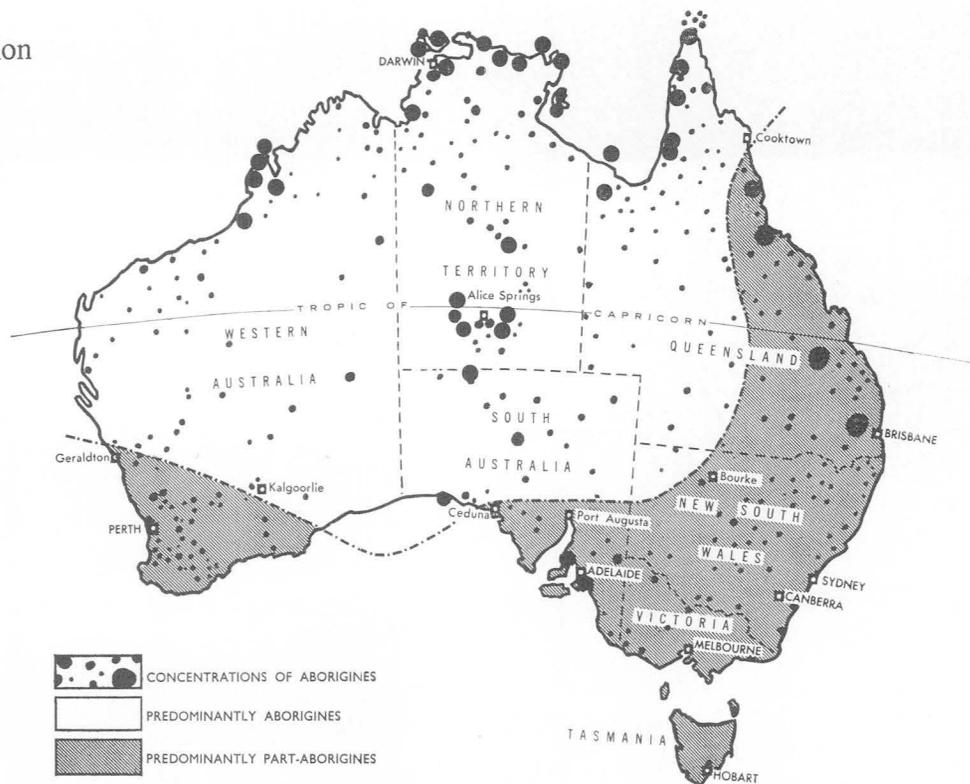
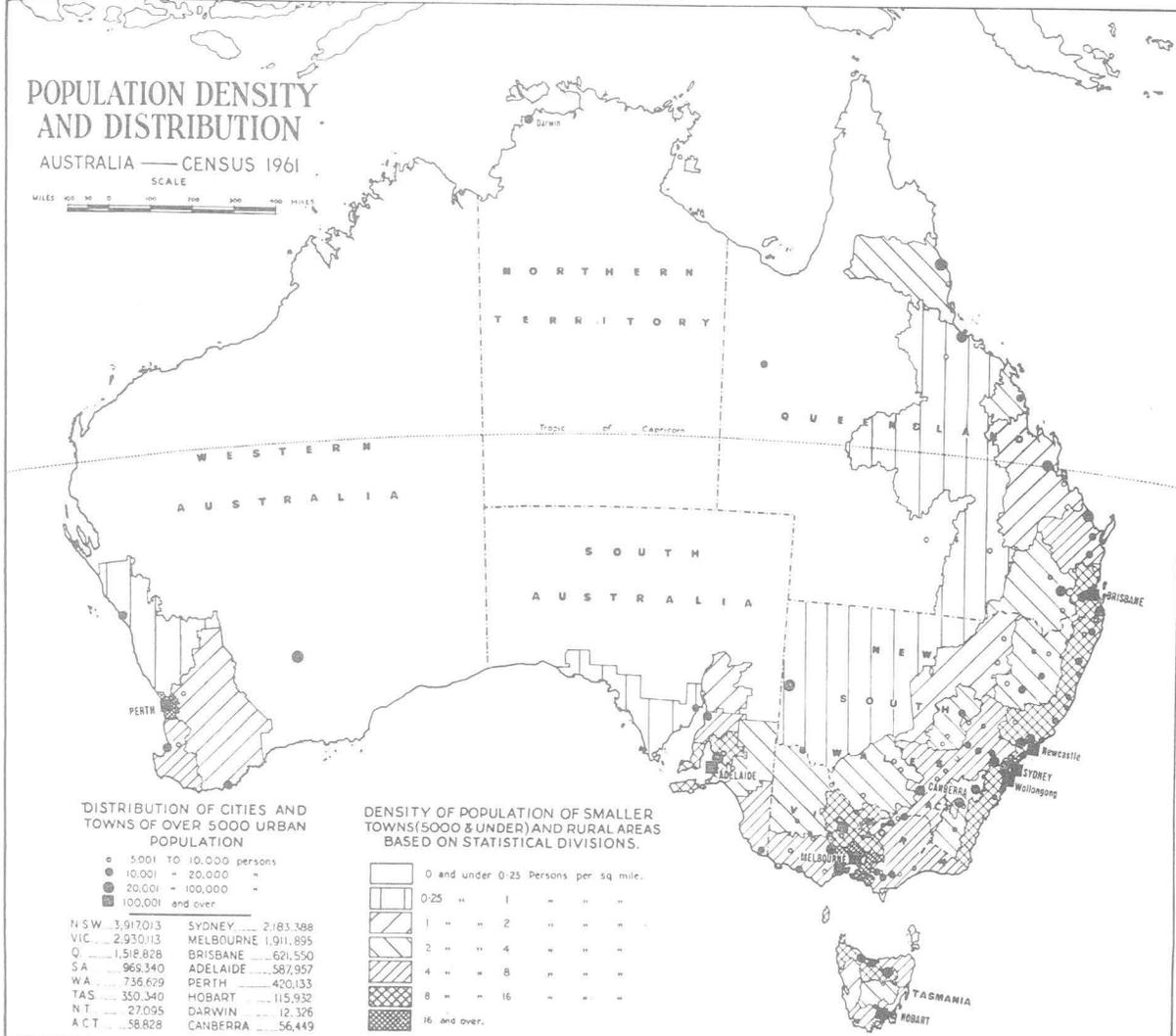


PLATE IV.

POPULATION DENSITY AND DISTRIBUTION

AUSTRALIA — CENSUS 1961
SCALE



DISTRIBUTION OF CITIES AND TOWNS OF OVER 5,000 URBAN POPULATION

- 5,001 TO 10,000 persons
- 10,001 - 20,000 "
- 20,001 - 100,000 "
- 100,001 and over

N.S.W.	3,917,013	SYDNEY	2,183,388
VIC.	2,930,113	MELBOURNE	1,911,835
Q.	1,518,828	BRISBANE	621,550
S.A.	969,340	ADELAIDE	587,957
W.A.	736,629	PERTH	420,133
TAS.	350,340	HOBART	115,932
N.T.	27,095	DARWIN	12,326
A.C.T.	58,828	CANBERRA	56,449

DENSITY OF POPULATION OF SMALLER TOWNS (5,000 & UNDER) AND RURAL AREAS BASED ON STATISTICAL DIVISIONS.

[White box]	0 and under 0.25 Persons per sq. mile.
[Diagonal lines /]	0.25 " 1 " " "
[Diagonal lines \]	1 " " 2 " " "
[Horizontal lines]	2 " " 4 " " "
[Vertical lines]	4 " " 8 " " "
[Cross-hatch]	8 " " 16 " " "
[Dense cross-hatch]	16 and over.

may revive in New South Wales when it has sunk in Europe?"¹⁸ Phillip emphasized to the authorities in England that farmers were required so that the colony could feed itself. In January, 1793, the first free emigrant-settlers, five in number, arrived and received grants of land. They had been sent out by the Home Government, thus marking the inauguration of New South Wales as a colony for free men. Henceforth, men could come for the sole purpose of settling in a new land; and as the years passed by a tiny trickle of free settlers became a rivulet, and then, from time to time, a flooded stream, which washed away the system of transportation with its convicts and keepers, and left a land peopled for the freed and the free, but less and less of the former and more and more of the latter.

For some decades, convicts and freed persons outnumbered those who came free and those who were free because born in the colony irrespective of the condition of their parents. This was still the case in 1830 in spite of the arrival of many free immigrants in the 1820's, but, of course, the free settlers required labour, and England had convicts to spare. The change in the proportion came between 1830 and 1833, with the continual increase in the number of those born in the colony, and with the cumulative effect of free immigration. And though transport of convicts during the prosperous "1830's" was heavier than during any decade, and with a total of 32,506 about equalled that of the two preceding decades, the tide of free immigration rose even higher, amounting to 46,429 for the nine years 1832-1840 inclusive. For these same nine years, 29,222 convicts arrived. Few convicts came in 1841, and none later, so that the increase in the population of eastern Australia (New South Wales) during the period 1842-1851 referred solely to "arrived free" and "born in the Colony". The following table will help.¹⁹

Year	Convicts	Freed	Total Convict and Freed	Arrived Free or Born in Colony	Total
1810	12,749	15,450	28,199	2,097	30,296
1828	15,668	7,530	23,198	13,400	36,598
1836	27,831	—	—	—	77,096
1841	25,146	19,395	44,541	81,998	126,539
1846	10,838	27,024	37,862	149,551	187,413
1851	2,693	26,629	29,322	157,921	187,243

Actually, from 1833 to 1850, an average of 6,119 free immigrants arrived annually in New South Wales, a total of 116,259 for nineteen

¹⁸ Quoted in G. B. Barton, *History of New South Wales from the Records*, Vol. I (1889), p. 85.

¹⁹ The figures for Port Phillip District are included in those for 1836, 1841 and 1846. That district was not settled until the end of 1834, and in 1851 became a separate colony—Victoria, 78260. The census for 1836 did not distinguish between free and freed. (From A. P. Elkin, *The Diocese of Newcastle. A History*, 1955, p. 9.)

years. There were also departures, so that, for example, the net yearly gain during the decade 1841-1850 was 3,023. In addition, during the decade 1832-1841, after which transportation to the colony ceased, 3,016 convicts arrived annually, many of whom lived to be freed.

The most significant factor, however, in that early period was the rate of natural increase. From 1828 to 1846 the Australian-born population of the colony increased by 53,700, being more than six-fold, and during the period 1841-1846, by 33,000, or more than two-fold. For this same five-year period, the increase of Australian-born exceeded that of persons born elsewhere, that is, of immigrants, by 5,250. Such increase reflected a constantly increasing rate of births, and of excess of births over deaths. Thus, for sample years:

Year	Marriages	Births	Deaths	Excess of Births over Deaths
1825	239	442	392	50
1830	339	683	570	113
1831	436	911	615	296
1832	619	1,254	880	374
1836	774	2,120	1,628	492
1840	1,631	4,233	2,382	1,851
1841	1,924	5,204	2,894	2,310
1842	2,564	6,333	2,717	3,616
1843	1,831	7,182	2,293	4,889
1844	1,813	7,946	2,122	5,824
1845	1,837	8,522	2,128	6,394
1849	2,365	9,842	3,435	6,407
1850	2,825	10,037	3,379	6,658

As a result of these several factors, the population of New South Wales (that is, of the region from Port Phillip to Moreton Bay) increased rapidly from 36,598 in 1828 to more than double in 1836, to 126,539 in 1841, and nearly doubled again in the next decade, reaching 246,299 in 1851, this time with no additional convicts. Further, the passing by death of the earlier groups of convicts and immigrants, with their high proportion of males to females, and the arrival of free immigrants during 1832-1850 with only a small excess of males and with one third of the whole under fourteen years of age, indicated that the excess of births over deaths would continue to increase.

We must remember that in addition to the settlement in the eastern mainland, there were settlements also in Van Diemen's Land (Tasmania) since 1803-1804, in the far west on the Swan River since 1829, and in South Australia since 1836. And in them all the maintenance and increase of population was made possible by the discovery of useful land by official and unofficial exploring parties, and by settlers or squatters pushing out beyond the recognized boundaries of settlement. So that by 1850 the population of Australia and Tasmania was 405,000.

This has been described as a slow growth, but in the circumstances it was not so. The new land was four months or more away from the old countries, and establishing food-producing bases in it was a difficult task. A living had and has to be won from Australian soil; it is not a free gift. In addition, the defiant mountain range in the east and the semi-arid conditions not far from the coast elsewhere, except in the tropical north which has presented its own obstacles, were formidable barriers. They were only overcome by the stout-hearted and physically tough men, and, in time, women too, who could endure privations and yet push on beyond the evermoving boundaries of settlement.

A NEW ELEMENT IN THE POPULATION

Up to 1850, the population had been almost wholly British, but in the 1850's a change came, and came quickly. Gold was discovered in the east. Rushes set in, and the net increase for the ensuing ten years averaged 74,000 a year. But it was the nature, not the rate, of this increase which was significant. The news of the extraordinary finds spread to the west and to the orient. From Europe, America and China, as well as from the British Isles, men came in their thousands. In the first year of the rush in Victoria (a separate colony in 1851), "there were far more foreigners than people of British blood among the procession of immigrants who thronged the roads from the wharves" to the diggings.²⁰ These included thousands of Europeans—from many countries; but in particular, it included what was soon felt to be a frightening number and proportion of Chinese. By 1859 there were 42,000 in Victoria, being 1 in 12 or 14 of the adult population. During 1856-1858, 13,319 arrived in New South Wales, and three years later this number reached 21,000, or nearly 6% of the estimated population (350,860) of the colony, which since 1859 had been reduced to its present boundaries. By 1871, when the New South Wales rushes were over, there were still 16,261 gold-miners, and the 21,000 Chinese had dropped to 7,220. This was only 1.4% of the colony's population (503,981), but as they were nearly all adult males, and also had been and still were concentrated in a few areas, their presence seemed greater than it was. Even in 1881, when another influx of 2,500 came in two months, they were still only about 2% of the total population. The ratio of adult Chinese males, however, was about 1 in 10 of all male adults—which was roughly the proportion for all Australia.

In the meantime, Queensland's turn had come. During 1875-1877, the Chinese on the Palmer River goldfield in the far north increased rapidly from 1,763 to 17,000, and in the colony as a whole to an

²⁰ Ernest Scott, *A Short History of Australia*, 2nd edition, 1918, p. 210. "Before 1855 there were as many residents in Victoria alone as there were in all Australia previously to the gold discoveries." *Idem*.

estimated 25,000, which, partly through Legislative action, dropped to 11,200 in 1881. And then South Australia faced a similar situation when, in 1887-1888, 7,700 Chinese suddenly appeared, attracted by the possibility of successful mining in the Northern Territory. The same fears and reactions and restrictive measures followed as in the other colonies. Consequently, all the colonies agreed that uniform restrictive measures should be enacted to keep them out. These eventually were focussed in the Federal Immigration Restriction Act of 1901, which was designed to exclude all coloured people, and so, in fact, maintain a white Australia, that is, a population of European race. The effective method was to give non-European immigrants a dictation test in any prescribed language.

This, of course, took no account of the Aborigines who were at that period dying out, nor of the insignificant number of Asian people domiciled in Australia, in particular, the Chinese. Their numbers in 1881 were 38,274 males and 259 females, but in 1901 had fallen to 29,907, or 0.79 of the population. By 1933, the total was down to 10,846 (males, 9,311 and females, 1,535). Of these, 1,584 males and 1,316 females had been born in Australia. At the next census, 1947, following the War, the total had come down to 9,144, but those born in Australia had risen to 3,728 (males, 1,924 and females, 1,804).²¹

The Australian Restrictive Immigration Policy has achieved its goal, though not without heart-burnings and some strong criticism, at times, both at home and abroad. But it has been long recognized as a legitimate expression of a nation's right to determine the constitution of its own population. Moreover, as the proportion of non-European persons in the Australian population has decreased decade by decade until it is almost negligible, the administration of the policy has become markedly liberalized. In particular, the Migration Act 1958-1964 abolished the arbitrary dictation test as a means of excluding persons, whether members of other races or nations or whether considered undesirable on moral or political grounds. In addition, the new Act permits the Minister for Immigration to exercise discretion in admitting or excluding non-Europeans "taking into account the qualifications of persons wishing to settle here (in Australia), their ability to integrate readily into the community, and other aspects including considerations of a humanitarian nature and broad national interest", and bearing in mind that "Australia's immigration policy is based on the need to maintain a predominantly homogeneous population".²² This fact may be correlated with a significant change in Australian political thinking,

²¹ For events leading up to the Immigration Restriction Act see "Rethinking the White Australia Policy" in *A White Australia?* Australian Institute of Political Science, 1947, pp. 215-252.

²² *Commonwealth Year Book*, No. 52, 1966, pp. 219-221.

especially since the Second World War; the Dutch, French and British screens have been removed, and Asia, especially South-East Asia, is now an essential factor in Australia's external relations. Cooperation with, not avoidance of, Asians is now the statesmen's aim.

The new approach was already reflected in 1954. Whereas in 1947 there were 9,144 Chinese in Australia in a total of 21,495 persons of non-European race, by 1954 the number of Chinese had increased to 12,878 and the total of non-Europeans to 27,486. Of the Chinese, 4,767 (2,545 males and 2,222 females) were Australian-born, an increase of 1,039 since 1947. The trend continued: in 1961, persons of non-European race had risen to 41,580, of whom 20,382²³ were Chinese; 15,288 of the 41,580 were born in Australia, but as this figure includes 4,972 indigenes of the Torres Straits Islands, which are included in the State of Queensland, only 10,316 non-Europeans whose parents or grandparents came from beyond Australia, were born in Australia. A total of 21,921 of the remaining 26,292 were Asians. For the two years 1961 and 1962, the excess of arrivals over departures of persons born in China was 3,132, but for the next three years it was only 1,041, an average of 347. For these same three years, the excess of arrivals of all Asians over departures averaged 4,623, of whom Malaysians averaged 628 and persons born in India, Pakistan and Ceylon, 1,164.

Clearly, the liberalizing of the Immigration legislation has not meant any significant increase of non-Europeans in Australia. Under 40,000 in a total of over eleven millions threaten neither the purity of the "race" nor the economic structure of the country, especially as less than half of them are permanent settlers. The Commonwealth Year Book, 1966, states (p. 220) that there are (presumably at the end of 1965) some 38,400 non-Europeans in Australia, of whom 16,200 are Australian citizens (10,800 by birth and 5,400 by naturalization or registration), while 4,200 have resident status but have not sought or qualified for citizenship. The remaining 18,000 comprise 4,300 with temporary residence status, 1,100 visitors and 12,600 students who also possess temporary residence status.

Some admixture of race does occur. The census, 1961, records 8,428 persons of "half European" and "half non-European" descent, not a very disturbing number, even if it is an increase of 2,543 since the 1954 census. In addition, there were 39,172 described as half-

²³ Further, there were in Australia on June 30, 1961, 14,500 persons born in China. Most of these would be Chinese, but not necessarily all of them. Further, some Chinese would be included in the numbers of persons in Australia at the Census date who were born in Hong Kong (1,991), Singapore (1,635) and Malaya (3,519). Persons of Malay race numbered 1,063. The number of persons of Chinese race in 1961 born in Australia has not yet been made available. Presumably it would be nearly 6,000.

European and half-Aboriginal and 245 half-European and half-Torres Straits Islander. Thus does time lay the bogies of other and more sensitive days when the Australian Commonwealth had not attained to its present international stature.

THE AUSTRALIAN POPULATION OF THE EUROPEAN RACE

One feature of the rapid increase of the population, following the discovery of gold in 1851, was the coming of many non-British Europeans. Unlike the Chinese miners, whose skin colour, language and clannishness made them conspicuous, these Europeans were as other men except for their babel of tongues. Away from the mines, however, the newcomers from one country, Germany, tended to congregate in compact farming groups.²⁴ In 1861, Germans numbered 26,872. About 7,000 had entered South Australia by 1851, 4,000 or so settling there. Others went on to Victoria where, in 1861, there were 10,418 Germans, including over 6,000 on the gold fields. In that year, German-born persons in South Australia numbered 8,863. The remaining 7,600 were in New South Wales (where ten years later, there were 6,623) and in Queensland. Most of the Germans had come to Australia not to seek gold, but to work, to settle on the land, and to seize whatever opportunities offered. Hundreds of them were assisted immigrants.

Numbers of the Europeans, however, like the Chinese, followed the rushes and then left Australia, richer or poorer, without making any permanent contribution to the population. On the other hand, the gold seekers from the British Isles, like those from a disturbed Germany, tended to remain when the gold fever subsided, and so became part of the phenomenal rise in population from 405,356 in 1850 to over one million (1,145,585) at the end of 1860. The rate of increase slowed down during the next decade, as gold-mining, except for the rush in North Queensland, became a normal industry, instead of a feverish adventure. By 1871, the Australian population had risen by about half a million to 1,668,377 (males, 913,252; females, 755,125), and was overwhelmingly British.

In New South Wales, for example, in that year, 481,857, or 95.6% of the colony's total 503,981, were British and only about 2.3% were non-British persons of European race.²⁵ Actually, 92.94% of its population were either born in Australia or in the British Isles, com-

²⁴ E.g., in the Adelaide Hills and on the lower Murray, South Australia; and on the upper Murray (Albury region), in some Hunter River valleys and on the lower Clarence River, New South Wales.

²⁵ These came from the United States, 1,340; France, 891; Germany, 6,623; other foreign countries, 2,862. Possibly some Asians (apart from the 7,220 Chinese) were included in this 2,862. But some at least of those born at sea were children of immigrants from mainland European countries. The present writer knew a few such who belonged to his grandparents' generation.

pared with 91.86% in 1861 (when the total was 350,860) and 89.7% in 1881 (total, 749,825). On the other hand, the proportion of other (that is, naturalized) Australians in New South Wales had risen from 1.34% in 1861 to 6.94% in 1881. The significant point, however, is that the Government Statistician (T. A. Coghlan) in the first issue of *The Wealth and Progress of New South Wales*²⁶ thought it necessary to distinguish in the foreign-born category only Chinese (1.36%) and German (1.0%) from all other (1.78%). Clearly, the non-British European component, other than the German, was of little consequence, and it was not a matter of any concern. Mr. Coghlan could not foresee the degree of anti-German feeling which would arise during the 1914-1918 War. So, in the 1880's, the number of persons in Australia as a whole, who were born in Germany, increased to 44,961, after which it gradually declined to 32,990 in 1911, to 16,842 in 1933 and to 14,567 in 1947. Obviously, and understandably, German nationals were not welcome following World War I, nor during the Nazi regime. Migration, however, began again from about 1949 and increased in tempo. In 1954, German-born persons numbered 65,422, and in 1961, 109,320, and the 1966 census will show a further increase. A total of 10,058 assisted German migrants arrived during the 1961-1965 period.²⁷

At the turn of the century (census, March 31, 1901), 95.94% of the Australian population of 3,765,879 was born in the United Kingdom, in New Zealand and in Australia (77.23%). Almost all the Australian-born were of European descent, including a small minority of mainland-European descent. In that year, too, 74,637 of the population had been born in Europe and 12,507 in America. There were also 10,363 (or 0.28%) Polynesians, the category which covered the Kanakas working on the sugar cane fields of Queensland, most of whom were repatriated to their islands some years later.

The primary aim of Commonwealth immigration policy has been to keep Australia predominantly European in race, with an historic bias towards British immigrants, coupled with a ready welcome to northern Europeans, but a somewhat guarded and, at times, reluctant, acceptance of southern Europeans. Indeed, with regard to this third group, strong feeling arose in the mid-1920's that greater numbers were arriving and would arrive than could be assimilated, following on the United States' Immigration Act of July 1, 1924, which severely restricted immigration into that country. So, towards the end of that year, quotas were arranged with the various Governments from Malta and Italy to Albania, which slowed down the rates of the emigration

²⁶ The precursor of the *Official Year Book of New South Wales*. It ran from 1886 (published in 1887) to 1904.

²⁷ From 1947 to 1965, 75,671 assisted German migrants came to Australia.

of their nationals to Australia. For example, in 1901 there were 5,678 Italians in Australia and 8,135 in 1921, but from 1922 to 1926, 19,700 were admitted, 1925 being the peak year. It was in this year that legislative backing was provided for such agreements in the Immigration (Amendment) Act, 1925. In the same brief period, 1922-1926, 4,750 Greeks arrived, whom many Australians did not bother to distinguish from Italians. Moreover, Greek numbers rose from 3,654 in 1921 to 8,337 in 1933, in which year Italian-born settlers numbered 26,756. Of course, the total of all southern Europeans in Australia was a very small fraction of the total population, 6,629,839, but the late 1920's and early 1930's were a period of acute financial depression, an unpropitious time for migrants.

FACTORS IN POPULATION-BUILDING

Many factors operate in the growth and planning of the population in a new country as Australia was, and, to some extent, still is. The depression and general unsettlement of the 1930's and the implications of World War II retarded both natural increase and the flow of immigrants. Hence the population rose in the fourteen years (June 30, 1933, to June 30, 1947) by only 949,529, from 6,629,839 to 7,579,358, whereas, in the preceding twelve years (1921-1933) of post-War boom and part-depression, it rose by 1,194,105; and in the succeeding seven years (1947-1954), under the stimulus of post-War recovery and renewed immigration, it rose by 1,405,172. This latter increase was at an annual rate of 200,739 compared with only 67,823 annually in 1933-1947.

Wars and economic depressions and also strong economic competition and the fear of such give rise to understandable prejudices. Further, national prejudices find expression in symbols, for example, skin colour, or a derogatory term for a people, such as "dago". Thus, for a time, the classification southern European or "Mediterranean race" was almost synonymous with undesirable, and as many of this ethnic group are swarthy skinned, their dark shade of "white" symbolized undesirableness—a "hang-over" from the prejudice and fear of the "yellow" Chinese in the nineteenth century.

Such prejudices are not anthropologically based. It may be somewhat surprising to learn that the Nordics are "only secondarily and partially a blond type", and that, indeed, they are Mediterraneans who as farmers and herdsmen reached central and north-western Europe during the third millenium B.C. The blondism of skin, hair and eyes which marks a majority of the Nordics, could have been obtained "by mixing with the aborigines (they found in Europe) and/or by environmental

selection". Moreover, in most of north-western Europe, both Nordic and Mediterranean types are present and also a stocky, earlier type.²⁸

The significant differences between the British and Southern Europeans are not racial. Certainly, skin-shading is not of any fundamental significance; there is no political or national antagonism inherent in colour differences as such. Italy and Japan were Britain's allies in one war and enemies in another. We recognize that differences between ethnic groups arise in the course of local evolution and history and in the development of traditions, values and goals. Moreover, as the decades pass by, prejudices change or disappear, and old "bogies" are laid, as in the case of the Chinese in Australia, and also of the Germans once the Kaiser's and Hitler's ambitions were crushed. World War II ended in 1945, and between 1947 and 1962, 75,671 assisted German immigrants came to Australia, and in the same period, 116,247 assisted persons of the Mediterranean "race".²⁹ Of Mediterranean stock, persons in Australia, but born in Italy, numbered 33,632 in 1947; 119,897 in 1954; and 228,294 in 1961—an increase in fourteen years of 194,662. For the same three census years, persons born in Greece were respectively 12,291, 25,862 and 77,323; for those born in Spain, 992, 919 and 2,857; and for Maltese, 3,238, 19,988 and 39,338: a remarkable increase.

In spite of this, persons in Australia in 1961, who were born in six southern European countries,³⁰ were but 3·8% of the population (10,508,186), while other European-born persons (440,810) were 4·2%. More than half of the latter were north-western Europeans.³¹ For the rest, 8,729,406 were born in Australia, 47,011 in New Zealand, and 755,402 in the British Isles, constituting between them 90·7% of the population.³²

Persons born in Australia include the offspring of southern and other European immigrants. Conversely, the numbers of southern Europeans, given above, refer only to birthplace; many of them were already Australian citizens in 1961. Thus, of the 228,294 Italian-born persons in Australia in that year, over 74,000 had acquired Australian

²⁸ C. S. Coon, S. M. Garn and J. B. Birdsell, *Races, A Study of the Problems of Race Formation in Man*, 1950, pp. 81-4, 120.

²⁹ Italian, 41,028; Greek, 39,748; Spanish, 8,007; and Maltese, 35,264. We should note that the majority of early Italian immigrants were from the north, Piedmont, Venetia and Lombardy, and others from eastern parts of Sicily. Later, they have come largely from Central Italy and Calabria.

³⁰ Malta, 39,338; Italy, 228,294; Greece, 77,333; Spain, 3,831; Yugoslavia, 49,781; and Albania, 1,473. Total, 400,050.

³¹ Born in Germany, 109,320; Netherlands, 102,134; Belgium, 2,080; Denmark, 5,654; Norway, 3,218; and Sweden, 2,680.

³² The remaining 1·3% was born outside Australia; it included some of European race from America and elsewhere, as well as Asians, Pacific Islanders and Negroes.

citizenship. Likewise, 16,000 of the Greeks had done so, and 22,000 Yugoslavs. And this process has continued. Further, the excess of arrivals over departures in 1961 of persons born in Spain, Italy, Greece and Yugoslavia was 12,590, but in that same year 18,788 such nationals applied for and received Australian citizenship, the adults amongst them having resided in Australia for five years. During the five years 1961-1965, the "excess arrivals" from those same four southern European countries was 125,690, and the number naturalized (January, 1960, to June, 1965) was 88,689. In addition, the "excess arrival" of Maltese was 17,631; they are British subjects.

Thus assimilation is proceeding. Another sign of this is the amount of intermarriage between Australian-born persons on the one hand and southern and other Europeans on the other hand. In 1961, 156 Australian-born men married wives born in Greece, Italy and Yugoslavia, and 222 did so in 1964. Some of these men may have been sons of earlier southern European migrants. Likewise, in 1961, 1,057 migrants from Greece, Italy and Yugoslavia married Australian-born women, and 1,219 did so in 1964. Again, some of these brides, but by no means all of them, were no doubt daughters of former migrants from the countries of their husbands.³³

The 1966 census recorded an Australian population of 11,540,764, apart from full-blood Aborigines. Of these, 7,143,492 live in the capital cities, including Darwin (20,261) and Canberra (A.C.T.) Statistical District (106,995). At present the population is rising both through natural increase and through immigration. From time to time attempts have been made to predict Australia's numerical growth and also to indicate what the ceiling, or optimum population, should be, taking into consideration climatic conditions and possible economic development. The Commonwealth Statistician made two alternative predictions in the first edition of the Commonwealth Year Book (1901-1908). The first assumed that the rate of increase for the period 1896-1907 would remain permanently in force. The second assumed that the rate of increase would be the same as occurred in the United States during 1790-1860 when the conditions as to density of population there were comparable to those in Australia in 1900-1907. The two predictions, or rather series of predictions, of the Australian population at the end of ten-year periods are marked A and B in the following table, in which line C gives the contemporary intercensal estimates of the population in the same years. Line D gives the actual enumeration at

³³ For Australian-born bridegrooms in 1961 and 1964 respectively marrying women born in Germany and the Netherlands the figures were 554 and 947; and for bridegrooms from those countries marrying Australian-born brides, the figures were 937 and 1,401 respectively.

the nearest censuses, and line E gives the figures for two later censuses. All start from the intercensal figure for 1907, 4,197,037.

		1910	1920	1930	1940	1950
Prediction	A	4,388,000	5,091,000	5,906,000	6,852,000	7,949,000
Prediction	B	4,588,000	6,176,000	8,312,000	11,188,000	15,058,000
Intercensal estimates	C	4,425,083	5,411,297	6,500,751	7,077,586	8,307,481
		Apr. 1911	Apr. 1921	June 1933	June 1947	June 1954
Nearest Census ..	D	4,455,005	5,435,734	6,629,839	7,579,358	8,986,530
Census	E	10,508,186	(June '61)	11,540,764	(June '66)	

The remarkably close correspondence of lines A and C shows that the Australian rate of increase of 1.7% annually for 1896-1907 was maintained on the average for the period 1907-1950, the booms being evened out by two world wars and by the depression of the early 1930's. Australia did not follow the United States' pattern assumed in line B, and has not done so since 1950. Even by 1966, the actual population was still far short of the 15,000,000 mark which on the alternative, assumed rate would have been reached in 1950. This number may be reached in a couple more decades; but the annual rate of Australia's population growth, which has averaged 2.29 from 1946 to 1960, declined during 1961-1965 to 2.01, and we cannot foresee the conditions governing natural increase and migration during the rest of the century, any more than the Commonwealth Statistician of 1907 could foresee the good times, the depression and the wars of the following forty years.

This difficulty is illustrated by the opinion of a scholar in 1946 when World War II was just over, and the rate of increase for the preceding ten years had been 0.96. He suggested that if trends in vital rates during the following generations represented orderly developments of those of the pre-World War II period, and provided that no major migration took place, then Australia would reach eight millions by 1970. Also, because the demographic structure of Australia resembled closely, though on a smaller scale, that of the United States, there seemed "little prospect of the Australian population growing to more than nine millions by the end of the century, even with substantial immigration".³⁴ Obviously, pre-war trends have been speeded up, for in 1966, the eleven and a half million mark was passed, with an increase of almost four millions in nineteen years—an annual increase of 2.24%. This has been associated with imaginative water conservation and irrigation schemes; revitalizing of arid lands where sufficient though moderate rains prevail; the extension of animal husbandry into hitherto grazing areas; great expansion of secondary industries; a growing confidence in ability to live in, and exploit, the tropical

³⁴ W. D. Borrie, "Australia and the World in Transition", Chapter 1 in *A White Australia?*, 1947, pp. 17-9, 33, 49.

regions; and perhaps, above all, the spectacular discovery of oil and valuable minerals. The search for, and the extraction and processing of these minerals, has required vast capital, the most modern equipment, high scientific knowledge and technical skill, efficient personnel and acceptable living conditions. All have been and will be forthcoming, never mind how apparently inhospitable or how trying the regions have been thought to be. Providing the necessary water for man and industry will, in some cases, be initial steps to living on the land and not just "out of it", when the mining days are done, if not before.

Certainly, the intensive development of primary, as well as of secondary, industries in the two-hundred-mile-wide regions on the east, south-east and south-west of the continent to which reference has been made, as well as the possibilities opened out by the great mining projects of the present and immediate future, suggest that there can be employment for continuing increase of population, provided, of course, that markets can be found for exportable products. What the migration intake will be or how the birth rate will behave cannot be foreseen, but while we may not suggest a rise of another four millions in the next nineteen years, yet we may say that the sixteen million mark may be reached at the end of the century, if not before. And this, no one was prepared seriously to forecast twenty years ago.

EUROPEANS IN TROPICAL AUSTRALIA

Moreover, we have no longer to defend tropical Australia as a place fit for white men to work in and for white women and mothers to live in. Certain areas may be more difficult than others, but there does not seem to be any evidence that either women's fertility or life expectancy drops in the Australian tropics, e.g., North Queensland, or is less than for women elsewhere in the continent. Modern housing, amenities, clothing, food supplies, medical services and air and radio communications have changed both the context of life in the north and of the residents' psychological attitude towards it. Certainly, the white man, of British stock, as much or more than the southern European, has shown that he can work there.³⁵ The development of Rockhampton, Townsville, Cairns, Mt. Isa and Darwin, as well as the sugar cane industry and mining, tell the story plainly, as does the increase of the population in tropical Australia.

³⁵ The work force in tropical Australia was 118,563 in 1947 and 136,310 in 1954. In 1954, too, 276,348 of the tropical region population were born in Australia (235,272 in 1947), 18,710 in the British Isles (17,420 in 1947), and 13,975 in Southern Europe, 12,029 of them Italians (6,736 in 1947). Some, but only a small proportion, of the Australian-born in North Queensland are of southern European parentage.

Principal Centres of Population in Tropical Australia

	1961	1966	Increase
Rockhampton	42,850	45,349	5·83%
Townsville	48,794	56,687	16·18%
Cairns	24,200*	26,400†	9%
Mt. Isa	13,358	16,713	25%
Darwin	14,408*	20,261†	40·62%

* Figures for 1960.

† Figures for 1965.

Over 90% of the non-Aboriginal population in tropical Australia is in Queensland, mainly in the eastern coastal strip. The following table shows this and also the 1947-1954 increase for the whole region.

	Males	Females	Total	Increase, 1947-54
<i>Tropical Queensland</i>				
1947	136,272	117,103	253,375	
1954	161,342	139,104	300,445	47,070
<i>Tropical Northern Territory</i>				
1947	6,117	2,584	8,701	
1954	8,659	4,797	13,456	4,755
<i>Tropical Western Australia</i>				
1947	3,614	1,567	5,181	
1954	4,508	2,297	6,805	1,624
<i>Totals for Tropical Australia</i>				
1947	146,003	121,254	267,257	
1954	174,508	146,198	320,706	53,449

The increase of 53,449 in seven years was substantial, and applied to females as well as to males. In Queensland, the former increased by 22,001 and the males by 25,070.

The next table shows that the 1947 to 1954 increase in the population of tropical Queensland (urban and rural) was due much more to natural increase than to migration.

Urban and Rural Districts of	1947	1954	Natural Increase	Net Migration mostly from Overseas
Rockhampton	78,672	88,198	9,468	58
Mackay	37,349	42,947	4,878	9,384
Townsville	66,953	75,699	7,039	
Cairns	73,489	90,787	10,341	
Peninsula	5,331	6,500	960	209
North Western	14,995	19,272	2,374	1,903
Totals*	276,789	323,403	35,060	11,554

* The difference of about 23,000 in each of the totals, compared with the figures for tropical Queensland in the preceding table, arises from Rockhampton District being partly south of the Tropic of Capricorn.

The natural increase for the seven years was 12·6% from a 1947 population with a masculinity of 116. Had the latter been near the Queensland figure for the period, 107 to 106, the natural increase would have been about 14%. However, the figures show that women can live in the tropics and bear children there.

PART V: MAN IN AUSTRALIA: THE TASK

For thousands of years, Australia was occupied by a dark brown race of nomadic hunters and food-gatherers whose economy was an "intelligent" dependence on natural phenomena and species as on one's relations. Aboriginal tribesfolk gathered their food over tribal territory not just because they knew the times and seasons and the life-cycles and habits of plant and animal on it, but primarily because their country knew them and "gave" them food in due season. They neither cultivated nor exploited; they gathered.

Into their midst, however, there came food-producers and exploiters of nature, whose numbers increased rapidly. These cultivated the land and sowed and reaped; they brought cattle and sheep which left the country bare in dry times; they dug down to remove and use coal and then other materials, leaving great holes and dumps, and they developed secondary industries. But the erstwhile food-gatherers, supplanted by strangers in the only country which knew them, were quickly gathered to the spirit-centres of their ancestors.

Such was the course of events except in the arid interior and the rugged northern regions which repelled a production and profit economy. But the Aborigines that remained there were out of sight and out of mind. So the rising colonies around the coast, especially in the south-east, took no cognizance of a coloured people who still existed in Australia, for as they had all but died out in the east and south, so they would die out elsewhere.

The colonies were white; they were British. When, therefore, crowds of men with yellowish skins appeared after 1851, the reaction was one of resentment, and even fear. Out of the turmoil of attitudes and emotions and conflicting thoughts, the national goal became Australia for the white race, especially for a population of north-western European and predominantly British stocks. This plan has been followed, at present less rigidly than hitherto, but with no indication of non-European racial elements in the population reaching one per cent. Moreover, the proportion of numbers to the size of the continent has become more realistic than thirty years ago when the total population was only seven millions. The "empty spaces" were sometimes seen as a symbol of an empty continent, selfishly retained for a self-chosen people. But the addition of four and a half millions in twenty-six years has changed this "image". For the increase has been in no small measure the result of a vigorous immigration policy. Net migration exceeded one and a half million persons from 1946 to 1965, 1,150,052 being assisted migrants of European race, including 594,956 from the

United Kingdom. Moreover, as we have seen, 400,050 of the population in 1961 were southern Europeans.

Further, in the light of the great developments in progress in mining, agricultural and irrigation projects, in secondary industries and in scientific research, there is no apparent reason for a marked slowing down of the rate of population growth as far as Australia's economic absorptive capacity is concerned. Whether migrants will be available from Europe will depend largely on conditions there; and whether the rate of natural increase in Australia will remain at the 1961-1965 figure of 1.27, which had dropped from the average of 1.38 for the fifteen years, 1946-1960, or will fall further is not predictable, but the trend in 1964 and 1965 was downward. However, the total increase by natural increase and net migration has remained around the 2% mark since 1946, reaching 2.31% in 1951-1955, and being 2.03 in 1965. If no world war or serious economic depression occur, we can anticipate steady growth. The 11,500,000 of 1966 might well be 15,000,000 in two decades, and the 20,000,000 mark not so far beyond the century's horizon.

In the meantime (according to the 1961 census), nearly 30% of the population is under 15 years of age, nearly 62% is in the 15-64 age group and 8.51%, 65 and over, with an average life expectancy for males of almost 68, and for females, of over 74. Clearly, in an era of advanced technology in almost every occupation, there is little scope for the unskilled worker of other days. No one should be allowed to slip into such subsidiary work, who has any potential for technical skills or professional careers. Except for a minority, males especially, but also girls, should not join the work force at 15, but should remain at school and proceed to technical training or to professional training in colleges or universities. And to balance the delay of entry by the younger generation into the "work force", thought should be given to extending the retiring age for all who are fit and willing.

The point is that all are needed. Man is in Australia to live. He must know the continent and seek out all its potentialities. He must develop and use them all, but without abuse of nature or of his fellows.

In this way, the white man will enter fully into his possession, with one important proviso; that he share fully that possession with the increasing race of dark brown Aborigines, for Australia is also their possession, and by a "title deed" which predates ours by millenia. They, with their cultural equipment, could not have entered fully into possession, but with our help and leadership, both they and we shall do so in these latter days. The Referendum of 1967 determined not only that the full-bloods will be counted, but also included in the numbers

of the Australian population. This symbolizes the fact that in the foreseeable future Australia, while being predominantly "white", will also be in some small degree, especially in the central and far northern regions, dark chocolate brown, with shades of colour in between. But all will be citizens.

By knowledge and skill applied not only to getting a living, but also to living together, man in Australia will make the continent a source of life, attainment and service as long as man and Australia exist.

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