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BARKING UP THE WRONG STUMP

DERRIC VINCENT AND THE 1969 TAUMATAWHANA RADIOCARBON AGE ESTIMATES

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Introduction

The article titled, *Des Ogle's Old Stump*, by D. Ogle, M. Jones, D. Sutton and R. Wallace appearing in the June 1998 issue of *Archaeology In New Zealand*, outlines an adzed stump from Taumatawhana in northern New Zealand as 'neither subfossil swamp wood nor a case of misidentification' and an 'important piece of evidence relating to human activity in Northland' at some point ...in the interval 1080 to 1420 A.D.'. Having worked in the Far North for some time, the writer believes readers should know that the article incorporates a series of factual errors derived from a poor knowledge of both the nature of the site and the history of its investigation. Contrary to the claim made by Ogle, Jones, Sutton and Wallace, the radiocarbon date NZ-3541, R 2898, was not derived from the adzed totara (*Podocarpus torara or P. cunninghamii*) stump dug from the Taumatawhana swamp, but came from a wind thrown kauri (*Agathis australis*) log lying on the foreshore of Taumatawhana Lake. The two radiocarbon dates, NZ-3650, R 2531 and NZ-3513, R 2531/B, derived from the adzed stump by the I.N.S. radiocarbon laboratory in 1969, bear no relationship to the age of the Taumatawhana site complex or date of human settlement of New Zealand.

Background

In December 1968, Derric Vincent, the secretary of a group of interested and active amateur archaeologists, then known as the Mangonui Archaeological and Historical Society (Johnson in prep.), and a reporter with (and subsequently editor of) the local Kaitaia newspaper, The Northland Age, was told of the recovery of wet wood artefacts from a drain being dug at the base of the large pa (N03/1) at Taumatawhana, for the Department of Lands and

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Survey by the drag-line operator Alan Green. Vincent asked Green to notify him of any further material uncovered and two days later, Green brought down to Kaitaia from the site a broken section of the carving now known by the misnomer, the Onepu 'lintel'. The following day, Vincent and Green visited the site and recovered or noted four wooden panels, a large curved slab of wood with a small rudimentary carving on one side, several trunks of small trees, burnt and broken sharpened sticks, a possible fragment of a wooden bowl, a broken pounder, a 'peg', gourd fragments, pieces of ochre, hangi stones and a large decayed flat piece of kauri that was felt to have been a possible panel or section of a 'window' that was reburied in the base of the drain (Peters 1969, Vincent pers. comm.).

Shortly after the discovery of this material, David Simmons, the then recently appointed ethnologist with the Auckland Institute and Museum, visited Kaitaia to present a talk to the Mangonui Archaeological and Historical Society. Following the talk, Vincent invited Simmons to accompany him on a visit to Taumatawhana. Vincent and Simmons visited the site on the 24th of January 1969 and assessed the swamp and farm drains from which the wet wood assemblage had been recovered. Also assessed were exposed remains which were left where they were found (Vincent 1969a, Simmons pers comm.).

In early March 1969, a second drag-line operator, J. E. Potter, was employed by the Department of Lands and Survey to widen and deepen the drain at the base of the pa. With approval of the then Minister of the Department of Lands and Survey, the Honourable Duncan MacIntyre (who subsequently visited the site in the summer of 1969/70, and who approved reservation of the site following earlier approaches from the R. Etana of the Aupouri Maori Trust Board in 1964 -1965 and whose family actually recovered parts of the Taumatawhana assemblage - Vincent pers comm.) Vincent, and Des Ogle, the Officer in Charge of the Aupouri Forest, revisited the site. This visit resulted in the identification of an extensive shell midden together with 'some basket work made of raupo' in the side of the drain in a 'low horizon approximately three feet from the surface'. The midden was subsequently described by Karel Peters as comprising 'most of those [shellfish]used for food and found on the east and west coasts' (Peters 1969). Also found in the drain was a 'flax kit' which 'apparently contained stones and one seed, further 'pegs' and a single flake of obsidian. J. E. Potter had also recovered a further 'chevroned panel' and had tossed into the scrub a flat piece of wood with a square hole that he had mistakenly thought was boxwood. This was never recovered. On the pa itself was 'a small

palisade butt' and '...a 15ft forked trunk which was apparently a support for a fighting stage or look out tower...' (Peters 1969). The latter had apparently been dug out and thrown down a bank in or about 1960.

Also exposed during farm drainage at the base of the pa was the adzed stump in question.

Exactly when the stump was found is difficult to determine as there is conflicting information. Vincent, who is now 88, understandably cannot now recall events at Taumatawhana in detail. What is clear however is that the stump was not found in 1971 as outlined by Ogle, Jones, Sutton and Wallace (1998: 133). Ogle himself (pers comm.), maintains that he found the stump in 1971 or 1972 but these dates are clearly incorrect as a photograph of Ogle with the stump was taken by Vincent and published in the *Northland Age* on the 14th of March 1969. Similarly Peters' account documenting the stump's discovery was written on the 16th of March 1969. Peters (1969) clearly outlines in his account of Vincent's and Simmons activities at Taumatawhana that the adzed stump was found by Vincent and Ogle during their first visit in March 1969. This version presented by Peters is that most frequently repeated in correspondence at the time (Vincent 1969d, Rafter 1969b) and is clearly the context outlined by Vincent (1969d) in his comment that the stump was found during '...the second widening of a cut to lower a lake...'. However, a letter written by Vincent to Peters on October 27, 1969, indicates that Simmons had also assessed the stump (see below) and Simmons (pers comm.) can recall this. As outlined, Simmons' one and only visit to Taumatawhana occurred in January 1969 (Simmons pers comm.). If this information is correct, then the only conclusion that can be drawn is that the adzed stump was initially discovered by Vincent and Simmons on the 24th of January 1969.

The location in the swamp at which the stump was found (along with most of the other components of the assemblage) is less contentious as it was marked on an aerial photograph of the site by Vincent in 1969 and is retained in his possession. On this basis and information presented below, the first adzed stump found at Taumatawhana (that photographed by Ogle, Jones, Sutton and Wallace) can be sourced to a small area of the former swamp, at the junction between the drain down the south-east side of the pa complex and the out-fall drainage channel cut through the ridge between the two pa.

As to the context in which the stump was found, there is again, unfortunately, no specific information. The subject is now a matter of failing memories and conflicting written accounts. Despite these problems however, it appears the stump was not '...still in a position of growth when discovered...' as maintained by Ogle, Jones, Sutton and Wallace (1998: 137). In October that year Vincent (1969e) commented to Peters in relation to the stump that:

It was undoubtedly adzed down, but was it erect or prostrate? Practical foresters [Ogle and Hobson?] say it was standing when it was cut; Dave S. thinks it was lying on the ground, and I would accept his view except that I do not see how the tree could have been turned over for adzing on four sides as the long roots are still attached to the stump (Vincent 1969e).

What is clearly evident from Vincent's brief outline of the views held by himself and Ogle that the stump was adzed as a living tree and Simmons view that it was subfossil, is that the stump was not in its original context when found. As far as Simmons recollects, the adzed stump he saw in January 1969 occurred in the row of spoil alongside the drain (Simmons pers comm.). This information is consistent with outline of the debate by Vincent (1969e) and, as with the date of recovery, suggests Ogle's (pers comm.) recollection that the stump was found in the side of the drain is inaccurate. While there is obviously confusion, Simmons, the only professional to assess the locality at the time, appears to offer the more reliable account. From the information available, and acknowledging both the variability in accounts and Vincent's original account in July 1969d that the stump '...was lifted out of apparently undisturbed peat by a dragline..', it appears the stump was found in the spoil heap alongside the drain having been dredged from the depths of the drainage channel from a context unrecorded and unknown.

According to Vincent (1969d, pers comm.), and corroborated in the account by Peters (1969), a week or so after his and Ogle's visit to the site in March 1969, Ogle and a worker from Aupouri Forest (Sam Hobson) and Vincent (Vincent 1969d), returned to Taumatawhana and removed the adzed section of the stump from its surviving root system with a chainsaw. This was done with the intention of displaying the stump in the Aupouri Forest Headquarters Museum. Of this activity, Peters recorded in March 1969:

A power saw cut was also made through the main root, and a piece taken which it is hoped to carbon date (Peters 1969).

Vincent (pers comm.) further describes the sample obtained for radiocarbon dating from the adzed stump as a 'biscuit' from a root section of the stump. On this basis, it appears that the ^{14}C date sample provenance was not the stump as maintained by Ogle, Jones, Sutton and Wallace (1998: 133) but a section of the surviving root system. The recovered stump, from which Ogle, Jones, Sutton and Wallace (1998: 138) have derived further samples for dating, was treated with a P.V.A. solution, sent up to Aupouri Forest Headquarters from the University of Auckland (Vincent 1969c, Ogle pers comm.).

According to Vincent (pers comm.) as a result of the personal involvement of the Hon. Duncan MacIntyre, the Department of Lands and Survey found money to have some of the recovered material radiocarbon dated. At some stage between March and October 1969, Vincent sent the adzed stump sample to Thomas Athol Rafter, the foundation director of the Institute of Geological and Nuclear Sciences at Lower Hutt, on behalf of the Mangonui Archaeological and Historical Society, to be dated. Vincent's correspondence at the time outlines that by October 1969, Rafter had 're-tested' a section of the adzed stump root derived from '...the interior of the wood sample' (Vincent 1969e). The date is given by Vincent as '4500 $\pm$ 60 years'. From comments in the correspondence it appeared that an earlier date had been obtained from the stump that corresponded with this later date (Vincent 1969e). The earlier date was not specified.

At some stage between Vincent's submission of the adzed stump sample to the I.N.S. laboratory and October 1969, Vincent informed Peters that he had found two further adzed stumps at Taumatawhana and a large wind thrown kauri log projecting into the lake (formerly submerged in the bed of the lake) adjacent to the swamp, and had informed Rafter of this (Vincent 1969e). Vincent also informed Peters that Rafter had requested further samples of wood from the swamp and lake (Vincent 1969e). In addition, Vincent also outlined that he had recovered two long pieces of a material he described as 'cut rata vine' and stated to Peters that he would ask Rafter to date these on the basis they might produce a more reliable date of human activities at Taumatawhana (Vincent 1969e).

As a result of the initial discovery of wet wood artefacts in the excavated farm drain, the Mangonui Archaeological and Historical Society notified the Department of Anthropology, University of Auckland, at some point early in 1969. Karel Peters, then employed by the Department, took an interest in the site and by the 16th of March that year, had compiled the unpublished report on Vincent's, Simmons and Ogle's activities at Taumatawhana referred to in this article. Subsequently, in mid 1969, Karel Peters, together with Peter and Teremoana Bellwood, visited the site and produced the map of the main pa (and the smaller pa), subsequently published by Davidson (1982). In addition, a weekend excavation of the pa was undertaken by the University at some stage in 1969. Those understood to have been involved in this excavation include K. Peters, E. Shaw, G. Irwin, P. Swadling and members of the Mangonui Archaeological and Historical Society (Coster 1984, Vincent pers comm.). Three test excavation squares were opened up on the main pa. No dates were derived from the excavation and the results were never published. According to Vincent's version of events, he couldn't convince the University to excavate in the swamp below the main pa where the wet wood assemblage had been recovered.

The 1969 radiocarbon samples, their provenance and resulting age estimates.

In order to be able to clarify the circumstances, the objects dated from the swamp below the main pa at Taumatawhana, and to determine when they were dated and the results, a new search of the I.G.N.S. gas counting database and file archives was undertaken for the writer by Nancy Beavan of the Rafter Radiocarbon Laboratory at Lower Hutt. This search was facilitated through use of a Rafter Radiocarbon Laboratory archival file number (50/102/2 - T.A.R., 8.7.69.) and a conventional date of 4410 $\pm$ 70 years B.P. for the adzed stump, outlined by Coster (1984). According to R. Sparks and N. Beavan (pers comm.), this information, occurring in the appendix to Coster's (1984) report on the archaeological remains in the Te Ramanuka Stewardship Area (Taumatawhana), enabled the laboratory to locate its records relating to events thirty years ago and to finally clarify the confusion surrounding the Taumatawhana dates.

The sample taken from the root of the stump shown on page 136 in the article by Ogle, Jones, Sutton and Wallace, was sent by Vincent, on behalf of the Mangonui Archaeological and Historical Society and Ogle, to the Hon. Duncan MacIntyre, the then Minister of Lands and Minister of Forests, on the 21st of April 1969 (Vincent 1969a). The sample was sent in the mistaken

belief (Ogle's) that the stump was adzed green and would therefore date the construction of the pa at Taumatawhana (Vincent 1969b). MacIntyre in turn submitted the request to the Hon. Brian Talboys, the Minister of Science who approved the dating of the sample at the D.S.I.R's I.N.S. radiocarbon laboratory. Subsequently, MacIntyre sent the sample to Rafter, who, in what now appears a lapse in judgement, accepted the stump sample from the Minister instead of following the established procedure for the submission of archaeological samples through the New Zealand Archaeological Association's radiocarbon committee. In acknowledging receipt of the sample, Rafter (1969a) mildly rebuked the Minister for the way in which the sample had been submitted to the laboratory though accepted the sample on the basis that he was confident they could derive a date from the sample that largely eliminated the potential for in-built age (see below).

A section of the sample from the root of the adzed stump taken from '...immediately beneath the bark...' (Rafter 1969b) was selected for dating (R 2531, NZ-3650). On the 26th of June 1969, R. C. McGill (1969a) informed Rafter that the sample had returned a conventional standardised age of 4419 ± 76 (original - 4410 ± 70) years B.P. and that the result was '....much beyond the probability of human felling...'. McGill outlined that the stump itself was subfossil wood. Rafter (1969b) subsequently wrote to Vincent (via the Minister of Lands) requesting comments on the result from Vincent and Ogle. In reply, Vincent (1969c), again on behalf of the Mangonui Archaeological and Historical Society, requested a further date from the stump from the Minister to confirm the original estimate. Considering the original result, the I.N.S. laboratory appeared on the brink of rejecting further involvement and is likely to have done so if it had not been for the fact that the request for a second date coincided with the laboratory's programme of investigation of atmospheric ^{14}C concentrations over the period 2000-3000 B.C. (Rafter 1969c). While prepared to run a new date, the radiocarbon laboratory appears to have been unwilling to date a new sample from the stump on the basis of University of Auckland's treatment of the stump with P.V.A. (Rafter 1969c). A new date (R2531/B, NZ-3513) was run on a further section of the original sample. A '.....section of the wood approximately half way between the bark and the heart was selected....' (McGill 1969b) in August 1969 and produced a conventional standardised date of 4600 ± 42 (original 4600 ± 50) years B.P. As far as has been determined, no other dates were derived from the adzed stump in question, then or subsequently, by the Rafter Radiocarbon Laboratory.

The date of 938 ± 31 (939 ± 31) years B.P. (NZ 3541- R 2898) that Ogle, Jones, Sutton and Wallace (1998: 137) claim (on the basis of incorrect information presented by Janet Davidson n.d. and now further unwittingly repeated by Higham and Lowe 1998) to have been derived from the adzed stump portrayed, was derived from the 'wind thrown' kauri log lying on the foreshore of lake below the main pa, on the other side of the hill. The result form in the Rafter Radiocarbon Laboratory archival radiocarbon database specifies the date is derived from the 'Out 30 rings; swamp kauri' under the heading 'Wind Felled Tree'. It appears Ogle, Jones, Sutton and Wallace were informed of this by the Rafter laboratory though chose not to disclose this to readers. The dated kauri sample was that requested from the Mangonui Archaeological and Historical Society (Vincent) by Rafter in November 1969 (Rafter 1969d) to further the laboratory's interest in the history of atmospheric ^{14}C. This date was run two years later in 1971. According to Vincent, the reason this date was run later than the others was that he could not find anybody who was 'willing to use their chainsaw on bonehard kauri' at the time. Later, a personal friend, 'J.S. Ward of Kaitaia Tractors', found a chainsaw and Ward's son, who Vincent recalls was 'a lecturer at Waikato' took the sample from the log on the edge of the lake (Vincent 1998). The kauri log from which this date was derived was last assessed by Coster in the mid 1980s (Coster 1985), who outlined then that Vincent's (Ward's) sample saw cut was still visible.

It is important to note that the I.N.S. dates outlined above are unlikely to be the only dates derived from samples submitted by Vincent. According to Vincent (pers comm.) and Coster (1985), samples were supplied to an American dendrochronologist (or a New Zealand dendrochronologist in America) by the name of Ferguson. This included a section of the base of the palisade butt from the main pa. It is understood some of this material was dated at the Scripps Institute, at La Jolla, in California, and the results (for reasons unspecified) created considerable interest at the time. Samples are also understood to have been supplied to an 'Alec Wilson', described by Vincent (pers comm.) and Coster (1985) as '...formerly of the University of Waikato' and 'now in UK'. The latter is understood to refer to Alex Wilson a former Professor of Chemistry and foundation director of the Radiocarbon Dating Laboratory, University of Waikato (Higham pers comm.). The date reported incompletely by Hicks (1977) of 3140 ± ? for the adzed stump was not derived from either of these groups of samples but appears to have originated from a letter written by Vincent to Janet Davidson in 1977, some years after the stumps discovery and dating. Vincent it appears, working

from memory rather than from the written result, mistakenly outlined "...Rafters lab dated it [the stump] at 3140 BP 1950.' (Vincent 1977).

The file search of archival material held by the Department of Conservation, Whangarei, (in part derived from Department of Lands and Survey files held by National Archives), through which the Rafter Radiocarbon Laboratory were able to relocate the correct dates, could be described as basic background research. The writer is uncertain as to the events by which Davidson came to understand that the stump had been dated to 940 $\pm$ 30 years B.P. (Davidson n.d.) and is even more uncertain as to why Coster (1989), who had tracked down one of the two original dates and the correct I.N.S. archival file in 1984, reverted to Vincent's (via Hicks 1977) erroneous figure of 3140 yrs B.P. for the stump in his discussion of radiocarbon dates from the Aupouri Peninsula. Irrespective, the results immediately and effectively render the age argument by Ogle, Jones, Sutton and Wallace as redundant. As was pointed out in June 1969 (McGill 1969a), in terms of dating New Zealand's prehistory the stump itself is meaningless.

Further inaccurate information in the article by Ogle, Jones, Sutton and Wallace is their determination of the surface of the stump as the heartwood sapwood boundary on the basis that '...all of the axial parenchyma contained dark cell contents' (Ogle *et al.* 1998: 135). The comment by Vincent (1969e), that the initial date run in June 1969 was from a sample under the bark layer was derived from the fact that some bark was present on the stump when found and was still present on the root section when the date sample was run in the I.N.S. laboratory (Rafter 1969b). This was the reason that Rafter accepted the sample initially without it being assessed by the N.Z.A.A. radiocarbon committee. This bark (described generally for montane totara as '...thin, flaky and rather paperlike...' - Salmon 1984: 62) was subsequently rubbed off the stump itself through excessive handling by visitors when it lay on the floor of the Aupouri Forest Headquarters Museum (Ogle pers comm.).

Similarly, Wallace's contribution to the overall age argument represented by the age calculations of the alleged missing totara tree rings is irrelevant because it appears there were no missing tree rings and the fictitious totara derived calculation was added or applied to a radiocarbon date derived from an *Agathis australis* sample.

In relation to the comment:

As the stump was still in a position of growth when discovered and the adzing is even around the circumference it is highly unlikely that this is a sample of subfossil swamp wood that has been used some time after death (Ogle *et al.* 1998: 137).

Ogle, Jones, Sutton and Wallace would be well advised to familiarise themselves with the nature of subfossil wood in peat swamps of the Far North. The peat swamp (drained lake bed) in the Department of Conservation's Lake Ohia Stewardship Area at the base of the Karikari Peninsula, cored by Mike Elliot during J. R. Flenley's and D. G. Sutton's 'Date of Colonization of Northland' project, with its 30,000 year old forest floor of preserved tree stumps in growth position is a good point of entry (four samples taken from kauri stumps in a growth position from the preserved forest floor provided conventional dates ranging from 31,000 ± 1,400 to 39,000 ± 2,300 years B.P. A single silver pine (*Lagarostobos colensoi*) stump from the same context provided a conventional date of 29,900 ± 1,200 years B.P. (Lands and Survey 1987). Striewski *et al.* (1994) obtained a single date from a depth of 2.6 m at the base of the single core from the swamp outlining development of the lake and swamp at CRA 42268 ± 1275 years B.P. (NZA-3488).

Ogle, Jones, Sutton and Wallace would also be further well advised to consider the nature of the extensive evidence of pre-contact Maori modification of peat swamps in the Far North, perhaps best summarised to date by Sutton's former post graduate student Ian Barber in 1982, 1984, 1989a, 1989b. At Taumatawhana itself, the remains of a system of ditches in the swamp to the north of the pa complex was initially recorded by Barber in 1982. The Taumatawhana peat swamp ditches were subsequently tape and compass mapped by Coster and Lawlor in 1984 and were the subject of both an aerial photographic run by the Forest Service and of a remarkable oblique photograph by Coster and Lawlor the same year (now lodged with the N.Z.A.A. N03/1 site record file). More recently the Taumatawhana swamp ditch complex has been accurately mapped by Maingay in 1991 (Maingay pers comm.). The adzing of subfossil wood in the base of ditches of this nature was an element of the first published accounts of the remains of prehistoric cultivation in peat swamps in far northern New Zealand (Wilson 1922: 130).

Alternatively, if Ogle, Jones, Sutton and Wallace had consulted the N.Z.A.A. site record file for Taumatawhana they may have become aware of initial notes made when the site was first recorded in 1966 of the potential for the out-fall channel cut into the swamp and through the ridge between the two pa, to have originated as part of the defences of the main pa (Bartlett 1966, see also Coster 1985, Maingay 1991, Vincent pers comm.). The adzed stump was dredged up from the base of the swamp at the south-east end of this channel.

A final criticism of the article by Ogle, Jones, Sutton and Wallace relates to their comment that their now clearly erroneous date range was '...consistent with the date range for earliest human environmental impact reported by Elliot *et al.* (1995) on the basis of a pollen core from the immediately adjacent Taumatawhana Swamp.' (Ogle *et al.* 1998: 137). Outside the criticisms of this radiocarbon chronology levelled by Higham and Lowe (1998), the date inversion at the critical point in the radiocarbon sequence and the association between the evidence of environmental change and the radiocarbon anomalies, the pollen core, by which the evidence of environmental impact was determined, was not derived from the Taumatawhana Swamp but from a core obtained from the bed of the lake immediately below and to the south-west of the main pa. The one and only published date (NZA-2808), obtained by Elliot from the base of one of eleven cores from two full intersecting longitudinal and latitudinal transects in the Taumatawhana Swamp (from which the whole artefact assemblage was recovered), was derived from the basal peat layer at a depth of 2.35-2.40m. This conventional twig date was 4792 $\pm$ 70 years B.P. and is matched by the basal gyttja sample (NZA-3486) from the core from the lake dated at CRA 4883 $\pm$ 64 years B.P. (Elliot *et al.* 1995: 900, Elliot pers comm.).

Ultimately, the correlation between the two dates could have been anticipated. As outlined 32 years ago (see Bartlett 1966, Vincent 1969d), prior to land drainage, the lake covered the swamp and the latter formed with the receding lake level. As such both the lake and its peripheral peat swamp are part of the same feature and, as the two dates indicate, formed at the same time. The correlation between the dates of formation of the lake and swamp extends to those derived from the probable montane totara stump and, taking into account that NZ-3513, R 2531/B was derived from a mid section of the root sample, provides direct evidence that the tree from which the stump was derived was growing when the lake (and swamp) formed some five thousand years ago and was enclosed and partially preserved within it.

Conclusion

In an attempt to support an argument for early settlement of New Zealand Ogle, Jones, Sutton and Wallace have unquestioningly accepted information from both a secondary source on a site in a remote location in the Far North and an incomplete radiocarbon inventory. The result was simply to compound the confusion over the Taumatawhana radiocarbon dates that had existed for the past thirty years. In light of the information presented above it is once again confirmed that the stump is subfossil swamp wood; has been the subject of an expanding sequence of misidentification and is of no relevance to the dating of human activity in Northland or New Zealand.

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