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Ant resilience under different fire regimes of controlled burns in
jarrah (Eucalyptus marginata Sm.) forest in Western Australia.

Submitted Graduate Diploma in Natural Resources Project, Western
Australian Institute of Technology, by

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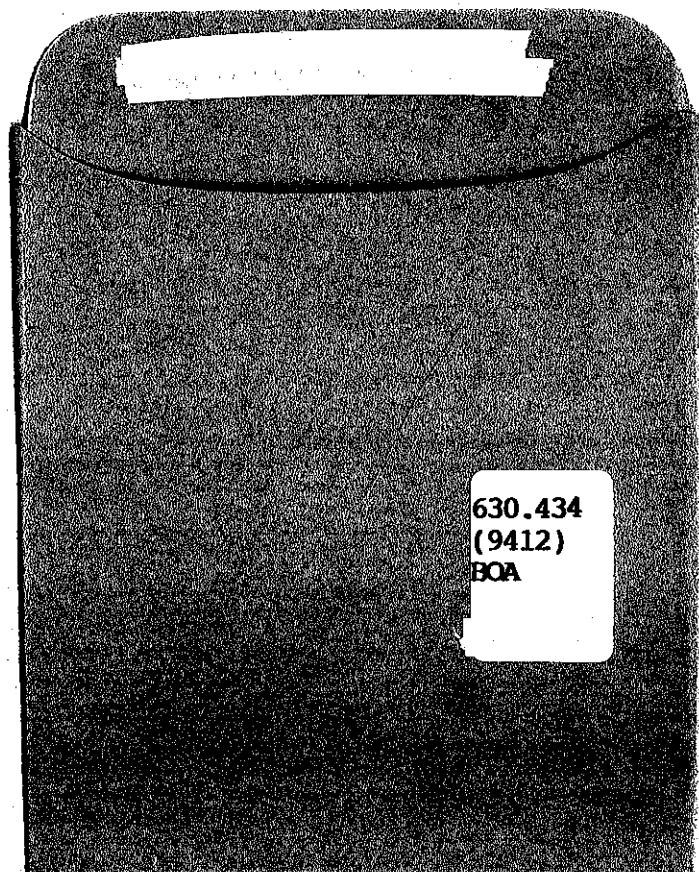
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Australia / W.J. Boardman

ENT OF ENVIRONMENT AND CONSERVATION



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ABSTRACT

Ants were collected at approximately monthly intervals for at least a year, using a pitfall trap technique at various sites in control and burn plots. Four plots were burnt in autumn at intensities of 30 kW/m, 175 kW/m, 175 kW/m and 500 kW/m. Another plot was burnt in spring at 1500 kW/m.

The differences between control and burn plots in terms of numbers of individual ants, numbers of species and species evenness were analysed for trends with increasing intensity of burn or for trends with season of burn. Particular attention is paid to trends relating to resilience, as indicated by oscillation patterns in the differences. Some attention is also paid to changes in patterns of dominance by species and numbers of individuals of those species.

Some plots showed trends to fewer ants, more species and greater evenness with intensity of burn while some plots showed only small differences. All burn plots were even and generally had more species than the controls although oscillations did occur. In the 500 kW/m autumn burn the oscillations displayed for differences in species showed a distinctly damped behaviour and there were generally fewer species in the burn than in the control. Thus there may be an indication here of less resilience with an increasing fire intensity for autumn burns. However, the hot spring burn showed difference patterns consistent with resilience in all respects.

Some species such as Camponotus michaelsoni, C. sp. J.D.M. 199, Iridomyrmex darwinianus and I. conifer could be important in both burn and control plots. However there were cases in which the time of relative importance of a species was different for the burn and control plots, implying some sort of oscillatory effect. By comparing numbers at times of dominance rather than at the same measurement time it does appear that numbers of ants for the dominant species were fairly similar in the burn plots whereas control plots could be dominated by a few species whose numbers are much greater than those of any other species.

All communities appeared resilient to the fire regimes used so that the effect of increasing fire intensity on resilience is not clear. There is evidence that the short-term effects of the burns was to decrease, to some extent, the numbers of individuals present and to increase the numbers of species present. But such effects were usually dominated by oscillations from cases of "more than usual" to cases of "less than usual".

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INTRODUCTION

Fire has long been a factor in the Australian environment and most of the sclerophyll plant species, which constitute an overwhelming part of the Australian flora, are not only considered fire-tolerant, but are sometimes classed as 'fire-requirers' and 'fire-promoters' (Kemp, 1981; Jackson, 1968). Under natural conditions it would seem that a mosaic of fire regimes could have occurred.

Wildfires can be of high intensity (>50000 kW/m (Vines, 1981)) when fuel accumulation is combined with periodic drought, high temperatures and strong winds, and as a consequence prescribed burning to reduce fuel accumulated in forests in a controlled way has been developed by Australian forest services (Shea et al, 1981). Periodic, low-intensity burns (usually <300 kW/m (Vines, 1981)) to reduce hazard does reduce the incidence of wildfires but the longer-term consequences of the imposition of this type of burning regime has not been fully studied (Shea et al, 1981).

Ants are of significant ecological importance in the southwest of Western Australia where species of Pheidole and Rhytidoponera prey on larvae of the economically significant jarrah leaf miner, Perthida glyphopa (Z. Mazanec, cited in Rossbach and Majer, 1983); some are seed harvesters and some of these store seed in their nests (Shea et al, 1979; O'Dowd and Gill, 1984).

Majer (1984a) reports that the build-up of ant fauna in rehabilitated mined lands mirrors the recovery of certain vegetation factors and also the abundance and diversity of many other invertebrate taxa. Thus they may also be useful in indicating the resilience of the ecosystem after the stress induced by fire.

Fox and Fox (1984) noted that ecosystems react to stress in the same way that an elastic medium such as a spring may behave after being stretched. To measure such effects it is necessary to know what the pre-burn situation is and to look at the differences between a burnt plot and a similar unburnt plot which could show oscillatory effects. If the system is resilient then there would be a pattern similar to that of a relatively undamped spring with peak differences gradually

decreasing. In a highly damped response there is less likelihood of returning to the original condition and this may indicate lower resilience. Of course, because a perfect control sample is never available in a forest environment, any differences could simply reflect site differences. However if there are sufficient plots showing similar trends then inferences made would probably be reasonable.

In this study, differences between control and burn plots for various fire regimes were studied in relation to the response of ant communities to fire. These were considered in terms of elasticity, in particular, and also species composition of the ant community.

MATERIALS AND METHODS

My Supervisor, Dr J.D. Majer, supplied data gathered from burnt and unburnt control plots in jarrah (Eucalyptus marginata Sm.) forest at various locations shown in Table 1. The plots were located either in the vicinity of Dwellingup or Karragullen shown in relation to Perth, the capital city of Western Australia, in Fig. 1.

Plots were burnt at different intensities and different times of the year, as shown in Table 1, and in different years. Intensity of burn was estimated using the Byram (1959) formula.

Plots were gridded at 5m intervals as shown in Table 1. Pitfall traps (see Majer, 1978) were located at each grid point a week before they were collected. Samples were taken at approximately monthly intervals.

The relationship of control plot to the plot in the burnt area is similar for all plots and the Karragullen plots are the same plots as described by Majer (1984b). The plots were selected for their proximity and their similarity of vegetation, soil and litter composition. The burn plots in Plavins Block had the same control plot.

Each ant species sampled at the Dwellingup (D) or Karragullen (K) sites was given a field number applicable to the study area (D or K).

Where ants could not be assigned specific names they were coded with Australian National Insect Collection (ANIC) or Western Australian Institute of Technology (J.D.M.) code numbers. The taxonomy of many Australian ant genera is not well known (Rossbach and Majer, 1983). Some of the species names apply only in a very broad sense and therefore identify what are often species complexes. The list of species collected and the area of collection (D or K) with appropriate area codes, is shown in Appendix A, Table A.

Data Analysis

The data were analysed on a total plot and, to some extent, an individual species basis. Total ant individuals in a plot were derived by summing over all species, no matter how apparently insignificant the presence of a particular species may be. Similarly for species richness, where all species sampled were included in the total for each measurement.

Dominance of a particular species in a sample was based on the relative numbers of individuals of a species which were trapped in the sample, where the sample is taken to be the total contribution from all the pitfall traps in the grid after sampling over a 7-day period.

Species evenness is the degree of apportionment of the individuals amongst the species present in an area. Evenness was calculated by the following formula:

$$J' = H' / \log_2 S$$

where

$$H' = (N \log_2 N - \sum n_i \log_2 n_i) / N$$

is the Shannon-Weiner index (Krebs, 1978), N is the total number of individuals, n_i is the number of individuals of the i'th species and S is the total number of species present. Thus if most ants belong to the same species the J' will be low, especially if there are many ant species sampled.

RESULTS

Controls and burns of a particular area will be considered together. Cooler burns will be considered first and hotter burns last. In this context, the autumn burns will be considered prior to the hot spring burn.

Tables and figures are to be found at the end of the text just prior to the tables comprising the appendices, with tables first and then figures.

Total ant individuals will be considered first, then species richness. Trends at the individual species level will then be considered in relation to the most dominant ants. Finally, the evenness in community composition will be considered.

Each plot will be considered in turn for each of the attributes just outlined. Then trends across plots will be identified for each attribute.

Total Ant Individuals

a) Plavins 30 kW/m autumn burn

The number of individuals of each species sampled in the control and 30 kW/m burn plots in Plavins Block are shown in Appendix B Tables B1 and B2 respectively. The overall number of ants for these plots, regardless of species, and the difference between burn and control are shown in Figures 2 and 3 respectively and are also presented in Table 2.

Both burn and control plots showed a trend of fewer numbers of ants during winter in the period between 5 weeks before the burn and 20 weeks after, with a fairly definite upturn 20 weeks after the burn (Fig. 2). Both plots peaked sharply in December between 33 and 40 weeks after the burn. After that the burn plot returned more gradually to autumn levels than did the control. The December

peak was much less for the burn than for the control, being about 45% less. However both peaks were in phase. After the December peak the control plot showed a damped tendency toward a stable level with no more oscillations. The control plot did show evidence of another oscillation after the December peak with a minimum value occurring between 43 and 48 weeks after the burn.

Thus the behaviour of the control plot in the autumn of the following season was in contrast to that before the burn. However, the burn plot behaved very similarly to the way it did in the season prior to the burn, both March values for the burn being only 9 ants (6%) different. Both burn and control were of similar numbers in the April after the fire as they were of similar numbers in the April before the fire.

Between 0.7 weeks before the burn and at least 37 weeks after the burn, the burn plot had fewer ants and there was an accelerating trend to fewer ants until about 33 weeks after the burn (Fig. 3). Then there was a sudden increase in the amplitude of the curve when there were many more ants in the control plot than in the burn plot. This was then followed by a suddenly greater number caught in the burn plot as the control plot quickly returned to more normal numbers. The burn plot took longer so that it contained more ants than the control until after 50 weeks after the burn. This period was in April, and both burn and control had similar total numbers.

In the year after, however, the control had about 2.5 times as many ants as the burn plot in April (Table 2). Just as the burn plot had more ants than the control in the February following the fire, so it did in the February of the next 2 years in weeks 150 and 202 following the fire. Thus there seems to have been a slower rate of decline to normal autumn levels in the burn plot when compared with the control plot.

b) Plavins 175 kW/m autumn burn

The number of individuals of each species sampled in the control and 175 kW/m burn plots in Plavins Block are shown in Appendix B

Tables B1 and B3 respectively. The overall number of ants for these plots, regardless of species, and the difference between burn and control are shown in Figures 4 and 5 respectively and are also presented in Table 2.

This plot shows a very similar pattern to that of the 30 kW/m burn. It shows a period of very low ant numbers in winter, greatly increasing in spring, peaking in December and decreasing more slowly than the control plot back to levels similar to those prior to the burn in the March-April period (Fig. 4). The April value was 50% less than the control whereas there was little difference between them in the April prior to the burn. The pre-burn pattern of March values was much greater than the control and this differential was retained after the burn.

A fair degree of variation in April values seems possible as shown by the three April values for the control plot ranging from 67 to 169 (Table 2). A similar trend was illustrated for the February values of the control plot, which ranged from 57 to 102. In fact, in both cases there was a trend for increasing numbers of ants. The 175 Kw/m burn plot showed a big decrease from 157 to 79 ants trapped and then a moderate increase to 101.

c) Victoria 175 kW/m autumn burn

The number of individuals of each species sampled in the control and 175 kW/m burn plots in Victoria Block are shown in Appendix B Tables B4 and B5 respectively. The overall number of ants for these plots, regardless of species, and the difference between burn and control are shown in Figures 6 and 7 respectively and are also presented in Table 3.

Both burn and control started with large numbers of ants prior to the burn in late summer and there was a steady decline to low values in winter in the control. Both burn and control plots had

relatively few ants in the winter months. There was then a gradual increase after 25 weeks following the burn in both plots, which peaked in summer at about 45 weeks after the burn. The burn plot peaked in February at 275 ants and the control plot peaked at the same time at only 151 ants.

The burn plot had many fewer ants than the control plot before the burn and there was no difference immediately after the burn. The main feature of the differences (Fig. 7) is that in the mid-autumn period immediately after the burn and in the following summer the burn plot had many more ants trapped than the control. However, at other times there was a small and oscillating difference between the two plots.

d) Curaru 500 kW/m autumn burn

The number of individuals of each species sampled in the control and 500 kW/m burn plots in Curaru Block are shown in Appendix B Tables B6 and B7 respectively. The overall number of ants for these plots, regardless of species, and the difference between burn and control are shown in Figures 8 and 9 respectively and are also presented in Table 4.

The control plot shows the seasonal trends. There were fewer ants trapped in winter than autumn or spring with a peak in the first half of summer with a gradual decline from then until a low point was reached at some time in winter.

A phase difference developed between the burn and control plot trends about 10 weeks after the burn. This phase difference continued until about 50 weeks after the burn. Thereafter they became in phase again.

The general trend in differences was for fewer ants in the burn plot until about 4 or 5 weeks after the burn. This was followed by a peak positive difference 15 weeks after the burn of amplitude about 50, and 30 weeks after the burn, in the early spring, there

were 60 more ants in the control than in the burn. Thereafter a difference in favour of the control occurred of about 65 in January, 43 weeks after the burn. This gradually tapered off to a stable pattern by 51 weeks after the burn.

e) Pindalup 1500 kW/m spring burn

The number of individuals of each species sampled in the control and 1500 kW/m burn plots in Pindalup Block are shown in Appendix B Tables B8 and B9 respectively. The overall number of ants for these plots, regardless of species, and the difference between burn and control are shown in Figures 10 and 11 respectively and are also presented in Table 5.

For some reason both burn and control plots showed a reduction in the numbers of ants captured 3 weeks after the burn compared with an earlier measurement in December and the measurement in January, 7 weeks after the burn. After January there was a gradual decrease in numbers trapped until some time in winter after which the numbers increased again. The control plot values for October and November of 133 and 134 after the burn were very similar to the value of 122 for the week in November prior to the burn. The three January values for the control were also generally quite high, being 162, 210 and 273 respectively.

The major trend was for an increase in ant numbers in both plots until about 5 weeks after the burn at which time the control began to decrease while the burn plot continued to increase until about 15 weeks after the burn to a much higher peak of about 270 ants. This was followed by a more rapid decrease in captures than in the control. During winter there were fewer ants trapped in the burn plot. Numbers were about equal again about 50 weeks after the burn. However, the burn plot continued to have more ants than the control in the summer months, for at least 3 summers after the burn.

Summer differences were much greater than absolute winter differences but, in winter, control plots had higher populations.

f) Inter-plot trends

In Plavins, both burn plots had less ants than the control from winter through to the December peak (Figs 2 and 4). After the peak more ants were trapped in the burn plots due to their more gradual return to winter conditions when once again there were fewer ants trapped in these plots. The long-term trend was for stable differences in the 175 kW/m burn plot but not necessarily in the 30 kW/m burn plot.

Most control plots peaked in December with only the Victoria control peaking in February, as did its burn plot (Fig. 6). In the first summer after the fire, the Plavins burn plots peaked at the same time as the control (Figs 2 and 4), but in Curaru (Fig. 8) and Pindalup (Fig. 10) the peaks were reached about a month later than the controls.

The differences for Victoria (Fig. 7) and Curaru (Fig. 9) show an upward trend after the burn which continued the trend prior to the burn whereas the Plavins plot differences (Figs 3 and 5) showed a downward trend which also followed the pattern set prior to the burn. These differences for autumn-burnt plots therefore had 2 relatively even oscillations between the burn and the summer peak. In the Plavins plots (Figs 3 and 5) there also appears to have been 2 oscillations even though the control plot had more ants, but there were big differences in favour of the control at the time of the summer peak. Thereafter more ants were trapped in all autumn-burnt plots than in the controls - at least until March.

The Pindalup spring burn appears to have had only 2 oscillations in the differences for the period between the burn and the second summer (Fig. 11).

In Plavins, up until December, the hotter burn had least ants, the cooler burn more ants and the control plot most ants (Figs 2,4 and Table 2). There was an exception in June when the hotter burn had

3 times as many ants as the cooler burn. However, the same trend didn't hold in Victoria and Curaru autumn burn plots (Figs 7 and 9). After the summer peak was reached in the controls for all autumn burns, the burnt plots had more ants until March or April. After December the spring-burnt plot had more ants than the control until May (Table 5).

The difference curves for Victoria (Fig. 7) and Curaru (Fig. 9) were similar in trend until about week 22. After week 22 the trend was for more positive differences in Victoria whereas Curaru continued to have negative differences. These opposite trends continued until about week 38 when the trend for both plots converged and also became similar for the Plavins plots.

The lower amplitudes of the peaks and troughs of the difference curve for the hotter Curaru burn (Fig. 9) appear to have been more subdued than all the other burns. However, this trend was not supported by the Plavins plots (Figs. 3 and 5).

The Plavins' autumn burn plots (Figs 3 and 5) appear to have been less stable than the Victoria (Fig. 7) and Curaru (Fig. 9) autumn burns. However, the controls for Victoria (Fig. 6) and Curaru (Fig. 8) behaved differently to the Plavins control (Fig. 2) where more ants were trapped. This was particularly marked in summer.

Of three autumn burns looked at, the only one to show long term stability was the Plavins 175 kW/m burn (Table 1). Interestingly the 30 kW/m cooler burn did not show long term stability with respect to the control (Table 1). The Curaru burn was not stable with respect to its control in the long term (Table 4) but was relatively stable in the numbers recorded in each January, these being 162, 139, and 195.

f) Interplot trends

Peaks in burnt plots occurred on or after peaks of controls, especially in warmer months when oscillations were most pronounced. Low and high peaks of burn plots generally exceeded those of controls or oscillations were of longer period - although this is not the pattern for the 500 kW/m autumn burn in Curaru, where the control plot had most of the highest peaks and the burn plot most of the lowest (Fig. 18).

For all burns except Curaru, there were usually more species in the burn plots and high peak differences occurred in the summer-autumn period. Oscillations were more subdued in winter. The 30 kW/m autumn burn plot (Fig. 13) had less pronounced oscillations in differences between plots than the hotter burns.

For the Curaru 500 kW/m autumn burn there were more species in the control than in the burn, the main exception being in the autumn and winter just after the burn (Fig. 19).

The trend 2 years after each burn was for less difference between the plots.

The 1500 kW/m burn (Fig. 21) behaved with some similarity to the 175 kW/m burn plots (Figs 15 and 17), though it had a trend of more ants in the control than in the burn in the winter period.

Dominance Rankings of Ant Species

Where confusion may arise in generic names by their beginning with the same letter, the full generic name will be used. Similarly for less common species.

a) Plavins 30 kW/m autumn burn

The eight most dominant ant species, listed in order of dominance are presented by successive, monthly samples for the control and

30 kW/m burn plots in Plavins Block in Tables 6 and 7 respectively. The eighth species is not necessarily the only one of the ranking given to it and the full list of ranked species sampled per month is shown for each plot in Appendix C, Tables C1 and C2 respectively.

The control plot was dominated by 5 particular species, these being: Iridomyrmex darwinianus for 10 of the first 15 measurements; Monomorium sp. 1 (ANIC) in late summer and early autumn; I. confier in autumn and much of spring and summer; Crematogaster sp. 6 (ANIC) in winter and December; and Camponotus michaelsoni in winter and autumn.

The 30 kW/m burn plot was dominated mainly by just 2 species, these being: I. darwinianus for 20 of the first 15 measurements; and Monomorium sp. 1 (ANIC) for 4 of the first 15 measurements, especially in summer. Other species were Rhytidoponera inornata during winter and I. sp. 20 (ANIC) in spring.

Thus I. confier and Crematogaster sp. 6 (ANIC) were more important in the control than they were in the burn plot but R. inornata and I. sp. 20 (ANIC) were more important in the burn plot. I. sp. 21 (ANIC) was also more important in the burn plot than it was in the control plot. Camponotus michaelsoni was of roughly equal importance in both plots as was I. darwinianus. Monomorium sp. 1 (ANIC) was more important in early to mid-summer in the burn plot than it was in the control plot.

The absolute numbers of each species are shown in Appendix B in Tables B1 and B2. The differences between them are shown in Appendix D, Table D1. This shows that not only was R. inornata more important in the burn plot but that it also had greater numbers of ants in the burn plot than in the control, especially over the period from late spring to early autumn. Similarly Monomorium sp. 1 (ANIC) and Monomorium sp. 3 (ANIC). I. sp. 19 (ANIC), I. sp. 20 (ANIC) I. sp. 21 (ANIC) and Melophorus sp. 3

(ANIC) were also more abundant in summer in the burn plot than in the control.

However I. conifer and I. darwinianus were mostly much more abundant in the control than in the burn. Crematogaster sp. 6 (ANIC) was also trapped in much greater numbers in the control than in the burn plot in the December after the burn. Only in December and February was I. darwinianus trapped in greater numbers in the burn plot than in the control. The differences thus showed an oscillatory pattern at this time.

Although Camponotus michaelsoni was of roughly equal importance in both plots, it was more abundant in the burn plot. Note that I. conifer was not important in the burn plot prior to the burn.

b) Plavina 175 kW/m autumn burn

The 8 most dominant ant species, listed in order of dominance are presented by successive, approximately monthly, samples for the control and 175 kW/m burn plots in Plavins Block in Tables 6 and 8 respectively. The eighth species is not necessarily the only one of the ranking given to it and the full list of ranked species sampled per month is shown for each plot in Appendix C, Tables C1 and C3 respectively.

There were 2 species which were most dominant most of the time in the burnt plot. These were I. darwinianus and I. conifer. I. conifer was prominent in both control and burn plots in the March prior to the burn. Three other relatively important species were Monomorium sp. 1 (NAIC), Camponotus michaelsoni, and to a lesser extent R. inornata and I. sp. 20 (ANIC).

Camponotus michaelsoni was more important in the burn plot as was I. conifer over late spring and summer. Camponotus michaelsoni was also slightly more abundant in the burn plot over this period except, perhaps, in December, as can be seen in Appendix D, Tables

D1 and D3. However I. conifer was much less abundant in the burn plot in the first half of this period but was much more abundant in the burn plot in the next three months.

I. darwinianus was not as important over summer in the burn plot as it was in the control plot and the numbers trapped were always much greater in the control plot than in the burn plot except in February when there was little difference. Camponotus michaelsoni was of slightly more importance in the burn plot and it was generally more abundant in the burn plot than in the control.

R. inornata and I. sp. 20 (ANIC) appeared to be more important in the burn than in the control. I. sp. 20 (ANIC) was more abundant over late spring and summer in the burn plot as was I. sp. 19 (ANIC) and I. sp. 21 (ANIC).

Crematogaster sp. 6 (ANIC) was more important in the control plot and was especially more abundant in the control in December. Leptogenys sp. J.D.M. 88 was more prominent in the control than in the burn as was Prolasius sp. 3 (ANIC).

c) Victoria 175 kW/m autumn burn

The 8 most dominant ant species, listed in order of dominance are presented by successive, approximately monthly, samples for the control and 175 kW/m burn plots in Victoria Block in Tables 9 and 10 respectively. The eighth species is not necessarily the only one of the ranking given to it and the full list of ranked species sampled per month is shown for each plot in Appendix C, Tables C4 and C5 respectively.

Camponotus sp. J.D.M. 199 was a dominant species in February, March and May in the control plot at about the time of the burn in the burn plot. In winter, I. conifer and Pheidole sp. J.D.M. 399 were most important in the control (Table C4). In spring in the control plot Camponotus sp. J.D.M. 199, Pheidole sp. J.D.M. 399, Melophorus sp. 3 (ANIC), I. conifer and I. darwinianus were

important at some stage. In summer I. purpureus, Melophorus sp. 1 (ANIC) and I. sp. J.D.M. 449 dominated at different times. In late summer and autumn I. sp. J.D.M. 449 and R. violacea were the most prominent in the control.

In the burn plot I. purpureus and Monomorium sp. 1 (ANIC) were important before the fire and I. sp. 18 (ANIC), Monomorium sp. 1 (ANIC), Melophorus sp. J.D.M. 221, I. sp. J.D.M. 499 and I. darwinianus and Camponotus sp. J.D.M. 199 were prominent at various times during autumn. The times of importance differed between burn and control for Camponotus sp. J.D.M. 199 and I. sp. J.D.M. 449. The other species were not prominent in the control plot during autumn.

In winter I. darwinianus and I. sp. J.D.M. 449 were the most prominent species in the burn plot. Notoncus hickmani was also of some prominence in June in the burn plot but in July in the control. Thus I. conifer and Pheidole sp. J.D.M. 399 were more important in the control than in the burn and I. darwinianus and I. sp. J.D.M. 449 were more important in the burn plot.

In spring, Crematogaster sp. J.D.M. 33, Melophorus sp. J.D.M. 221, Melophorus sp. 3 (ANIC), and Pheidole sp. J.D.M. 399 were most important in the burn. Pheidole sp. J.D.M. 399 was dominant in the control in September (Table C4) but in the burn plot in November (Table C5), so that times of dominance were out of phase. Similarly for Melophorus sp. 3 (ANIC) and Crematogaster sp. J.D.M. 199 and Pheidole sp. J.D.M. 399.

In summer, I. conifer, Melophorus sp. 1 (ANIC), Melophorus sp. J.D.M. 221, Melophorus sp. 3 (ANIC) were important in the burn plot. Only Melophorus sp. 1 (ANIC) was important at the same time in both plots with the species being more abundant in February in the burn plot than in the control. Other species were either out of phase or not important in the other plot during summer.

Nearly a year after the fire there were still different species dominant in each plot.

d) Curaru 500 kW/m autumn burn

The 8 most dominant ant species, listed in order of dominance are presented by successive, approximately monthly, samples for the control and 500 kW/m burn plots in Curaru Block in Tables 11 and 12 respectively. The eighth species is not necessarily the only one of the ranking given to it and the full list of ranked species sampled per month is shown for each plot in Appendix C, Tables C6 and C7 respectively.

The most dominant species in the control were Camponotus. sp. J.D.M. 199 and R. inornata (Table C6). In mid- to late winter I. darwinianus was also prominent.

Camponotus sp. J.D.M. 199 was not prominent in the burn plot either before or after the fire (Table C7). Melophorus sp. 1 (ANIC) was more prominent in the burn plot than the control but I. darwinianus was far more dominant in the burn plot than in the control plot. R. inornata was conversely much more dominant of the control plot than of the burn plot.

I. sp. 18 (ANIC), I. sp. 20 (ANIC) and I. sp. 21 (ANIC) were only of some prominence in the control plot and Pheidole latigena and Melophorus sp. 2 (ANIC) were more prominent in the burn plot compared to their prominence in the control.

e) Pindalup 1500 kW/m spring burn

The 8 most dominant ant species, listed in order of dominance are presented by successive, approximately monthly, samples for the control and 1500 kW/m burn plots in Pindalup Block in Tables 13 and 14 respectively. The eighth species is not necessarily the only one of the ranking given to it and the full list of ranked

Evenness

a) Plavins 30 kW/m autumn burn

The evenness calculated for each successive measurement of the control and 30 kW/m burn plots in Plavins Block is presented in Table 2 and in Figure 22. The difference between the burn and control plots are also shown in Table 2 and in Figure 23.

Evenness in the control plot increased before the burn to a peak value at about the time of the burn (Fig. 22). Thereafter evenness dropped to a low value of 0.25 in July, after which the trend was for increasing evenness until about February, after which it decreased again (Table 2).

Just prior to the burn in the burnt plot, evenness decreased, but after the burn it increased (Fig. 22) - opposite to the trend in the control plot. Both plots exhibited similar behaviour after August but in the second February after the burn the burnt plot showed greater evenness than the control. In the following February the control was slightly more even than for the previous 2 February occurrences but the burnt plot displayed less evenness than in February of the previous 2 years (Table 2). In the first February after the burn, both plots had high evenness values of 0.82.

The differences in evenness were therefore of an oscillatory nature but after an initial high peak, differences quickly reduced by the next April after the burn (Fig. 23). Whereas the burn plot maintained evenness the control plot showed much less evenness the next April (Table 2), so making differences between the plots relatively large (Fig. 23). In the long term however, oscillations were relatively small in amplitude.

b) Plavins 175 kW/m autumn burn

The evenness calculated for each successive measurement of the control and 175 kW/m burn plots in Plavins Block is presented in

Table 2 and displayed in Figure 24. The difference between the burn and control plots are also shown in Table 2 and are displayed in Figure 25.

The behaviour of the control was as for the 30 kW/m burn plot just discussed. However the evenness of the burn plot tended to oscillate about a fairly high value (Fig. 24).

In the first year after the burn this produced a pattern of differences with an early high peak followed by a gradual decrease (Fig. 25). The burn plot was therefore much more even than the control plot over the period from the burn until December. The long term trend was towards gradually less evenness.

c) Victoria 175 kW/m autumn burn

The evenness calculated for each successive measurement of the control and 175 kW/m burn plots in Victoria Block is presented in Table 3 and displayed in Figure 26. The difference between the burn and control plots are also shown in Table 3 and are displayed in Figure 27.

Both plots oscillated about a fairly high value. Early on after the burn the oscillations were out of phase but were soon back in phase only to be out of phase again for a short period late in the next summer (Fig. 26).

Thus the pattern of differences was for large peaks early on with peaks of later oscillations showing increasing evenness in the burn plot compared with the control plot (Fig. 27).

d) Curaru 500 kW/m autumn burn

The evenness calculated for each successive measurement of the control and 500 kW/m burn plots in Curaru Block is presented in Table 4 and displayed in Figure 28. The difference between the burn and control plots are also shown in Table 4 and are displayed in Figure 29.

Both plots oscillated about a fairly high value (Table 4) except that there was one oscillation in the burn plot which reached a much lower value than the rest. The oscillations were of about 15 weeks in period and were out of phase much of the time (Fig. 28).

This resulted in a differences curve showing many oscillations of about 10 week periods and with large differences at times (Fig. 29). In general the control plot was more even than the burn plot. The trend was for less difference between the plots.

e) Pindalup 1500 kW/m spring burn

The evenness calculated for each successive measurement of the control and 1500 kW/m burn plots in Pindalup Block is presented in Table 5 and displayed in Figure 30. The differences between the burn and control plots are also shown in Table 5 and are displayed in Figure 31.

Both plots oscillated about fairly high evenness values (Table 5). Oscillations were out of phase at times (Fig. 30). The control plot showed more rapid oscillations than the burn plot.

The trend in the differences was for oscillations of similar magnitude, but after an initial fast oscillation the trend was for time between peaks to be of about 20 weeks (Fig. 31). The burn plot tended to be more even than the control plot, with the main exception of late summer and autumn. The long term trend was for stability in evenness patterns in the burn plot but not in the control, where evenness was increasing.

f) Inter-plot trends

In the cooler autumn burns, the burn plots were more even than the controls, particularly in Plavins Block (Figs 23 and 25), with decreasing difference in Plavins during the first year after the burn but with increasing difference in favour of the burn plot in Victoria Block (Fig. 27). The Plavins control plot was somewhat

different to other control plots in its low evenness values over winter (Table 2).

In the hotter autumn burn, the burn plot was less even than the control, but the trend was for decreasing difference between the plots (Fig. 27). In the hot spring burn however, there was an initial trend towards a less even burn plot followed by a trend from a more even burn plot to less difference between the plots (Fig. 31).

Comparing Victoria (Fig. 27) and Curaru (Fig. 29) plots, there appears to have been more oscillations of shorter duration in the hotter (Curaru) autumn burn.

Response of Individual Ants to Fire

For the differences in numbers of ants of each species between the burn and control plots of the various plots sampled refer to Tables D1 to D9 in Appendix D. These tables have been produced for completeness of presentation of data but will not be discussed in detail as the consideration of fire effects and ant resilience is confined here to the broad community level.

DISCUSSION

Fox and Fox (1984) suggested that the response to ecosystem stress by more resilient ecosystems shows a relatively undamped oscillatory response compared to what the situation would have been without such stress. Conversely, a non-oscillatory or highly damped system response could be less resilient. As well as fire stress there may also be a response to summer drought.

For this reason it is important to consider in particular the differences in values between burn and control, since there would not only be summer drought but temperature factors as well. Indeed all control plots showed seasonal variation in total numbers of ants and species richness. In the Plavins plots in particular there were many more

individual ants and species in summer. This was also reflected in the burn plots. Seasonal effects also showed up in differences between absolute numbers of individual ants or species richness. Thus differences were amplified in the warmer seasons. Evenness did not seem to be related to season except perhaps in the Plavins control plot.

The curves for differences in numbers of individual ants trapped were oscillatory and the differences appear to have diminished over time. Therefore on this evidence they would seem to have been resilient - especially as the largest peaks in differences favoured the burn plots whereas in less resilient systems there would be a tendency toward extinction. Only in the Plavins plots was there a clear trend towards fewer individuals in the hotter burn, up until December.

Also, in terms of differences in species richness, cooler autumn burns were quite oscillatory and also had more species in the burn plot than in the control. However, in the 500 kW/m burn plot in Curaru (Fig. 19), there were a few initial oscillations, but the last one showed a damped behaviour as the burn plot approached the situation in the control plot from a situation of fewer species in the burnt plot. This possibly indicates less resilience in the hotter autumn burn compared to the cooler autumn burns. In the case of the hot spring burn the behaviour in differences indicates resilience as far as species abundance is concerned.

Most curves showing differences in evenness showed oscillations crossing the axis but in Plavins Block the burn plot showed more evenness than the control. This is probably more of a reflection of the control plot than of the burn plot since the other control plots were more even than the Plavins control plot. The Curaru 500 kW/m autumn burn showed many oscillations and it was the one which had the largest difference in favour of the control of any of the other plots. Yet the minimum value reached in both Curaru plots was still well above the minimum reached in the Plavins control plot.

Anderson and Yen (1984) found that post fire communities in the Victorian mallee region contained more equitable groups of abundant

species, rather than being dominated by 1 or 2 extremely abundant species as they were in seasons before the fire. This situation appears to have occurred in the Plavins plots (judging by the evenness trend) and in Curaru Block where the three species dominating the control (Rhytidoponera inornata, Camponotus sp. J.D.M. 199, Iridomyrmex darwinianus) (Table C6) were more similar in abundance in the burn plot (Tables B5 and B6) and a fourth species (Monomorium sp. 1 (ANIC)) was also more dominant (Table C7), though not necessarily at the same time. However no species appeared to lose at the expense of others.

In the Victoria burn there may have been a loss in numbers of some dominants in favour of other species. Certainly I. sp. J.D.M. 449 had fewer numbers in general (rather than considering specific sample times) in the burn plot (Table B5) than in the control (Table B4). However several species were generally more abundant more often.

In the Plavins burns, I. conifer showed a more spread-out distribution in the burn plot over December and January (Tables B2 and B3). This contrasted with the very high value for December in the control (Table B1). I. darwinianus showed fewer numbers less often with increasing burn intensity, whereas Monomorium sp. 1 (ANIC) possibly showed the opposite trend. Camponotus michaelsoni didn't show an increase in numbers but did show-up a bit more often in the burn plots. Some other species were much more prominent in the burn plots and some species were much less prominent, particularly Crematogaster sp. 6 (ANIC).

In the Pindalup burn plot (Table B9) there was a big decrease in the first year in numbers of I. darwinianus and in frequency of R. inornata compared to the control (Table B8). At the same time there was an increase in the numbers and frequency of 2 Monomorium species and Meranoplus sp. 12 (ANIC) compared with the control. The situation in this plot perhaps concords most favourably with the comments by Andersen and Yen (1984).

There was no discussion of oscillations in numbers by Andersen and Yen. However, ignoring oscillations and considering only the broad community level, there was a clear trend for fewer numbers of ants in

the Plavins burn plots the hotter the burn. It also indicated a greater evening-out of numbers in the burn plot compared to the control. Even allowing for a peculiar control, the trend would still have been evident if it had been less exaggerated. The situation considered by Andersen and Yen was that of a very hot fire and the similarity in the trends of the Pindalup plot regarding an evening-out of numbers may indicate the behaviour resulting from very hot fires.

CONCLUSION

All burn plots exhibited differences from control plots. These differences tended to oscillate with the time since the burn as one plot gained or lost in relation to the other. Gradually these differences decreased over the period of about 1 year, although there was some evidence for differences even three years after the burn. Some of these differences would have been due to the innate differences between the plots but because of the similarities or gradational differences with increasing intensity of burn between the various burns there was good evidence that many of the effects were fire related. In the terms considered by Fox and Fox, there is evidence to suggest that an ant community may be less resilient after a hot autumn burn than for a cooler autumn burn.

The response of individual species did not fully support the contention by Andersen and Yen that some species become far less dominant than others and that some other species become more dominant. There was a trend to greater evenness in cooler burns. However there was less evenness in the hotter autumn burn although numbers were of similar magnitude for the dominant species (albeit at different times). Perhaps if Anderson and Yen had considered the oscillating characteristics of their plots then their contentions would have been easier to compare with the findings here.

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Table 1 : Descriptions of burns where monitoring for ants has been performed

Site	Time of burn	Intensity of burn	Sample Method
Dwellingup: Plavins Block	Autumn	30 kW/m	Grid of 36 Pit Traps
Dwellingup: Plavins Block	Autumn	175 kW/m	Grid of 36 Pit Traps
Dwellingup: Curaru Block	Autumn	500 kW/m	Grid of 36 Pit Traps
Dwellingup: Pindalup Block	Spring	1500 kW/m	Grid of 36 Pit Traps
Karragullen: Victoria Block	Autumn	175 kW/m	20 Pit Traps

Table 2. Total numbers of ants, number of species of ants, and also species evenness for each plains burn and control plot. The differences between the burn and control values are also shown. Two burn plots were set up, one of 30 kW/m and one of 175 kW/m, and were burnt on 9/4/75. The number of weeks that each sample was taken prior to and after the experimental burn is shown. The vertical line of slashes (/) delimits those measurements taken before and after the day of the fire.

Weeks:	-4.7	-0.7	/	4.3	8.3	12.7	18.7	22.3	28.3	32.9	35.3	40.3	45.3	47.	52.	103.	150.	202.
Months:	Mar	Apr	/	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
TOTAL ANTS																		
Control:	90	67	/	96	69	62	42	139	154	169	1033	194	57	96	94	169	83	102
Burn (30 kW/m):	151	53	/	88	11	31	27	89	83	110	579	318	186	160	78	67	105	187
Burn (175 kW/m):	169	64	/	33	33	13	12	33	72	86	470	338	157	216	46	25	79	101
TOTAL SPECIES																		
Control:	10	10	/	9	4	4	5	9	15	16	13	17	10	12	12	8	11	11
Burn (30 kW/m):	22	10	/	10	6	5	7	7	19	20	21	22	16	14	10	8	10	13
Burn (175 kW/m):	19	13	/	7	3	7	5	10	15	17	23	17	20	21	10	9	15	7
EVENNESS																		
Control:	0.62	0.73	/	0.45	0.33	0.25	0.27	0.48	0.53	0.64	0.49	0.64	0.82	0.71	0.66	0.38	0.82	0.88
Burn (30 kW/m):	0.76	0.56	/	0.70	0.86	0.83	0.48	0.50	0.73	0.75	0.66	0.82	0.82	0.86	0.68	0.68	0.90	0.75
Burn (175 kW/m):	0.60	0.78	/	0.78	0.70	0.87	0.67	0.60	0.79	0.80	0.63	0.72	0.75	0.67	0.66	0.90	0.80	0.76
DIFFERENCES (Burn - Control)																		
Total Ants (30 kW/m):	61	-14	/	-8	-58	-31	-15	-50	-71	-59	-454	124	129	64	-16	-102	22	85
(175 kW/m):	79	-3	/	-63	-36	-49	-30	-106	-82	-83	-563	144	100	120	-48	-144	-4	-1
Total Species (30 kW/m):	12	0	/	1	2	1	2	-2	4	4	8	5	6	2	-2	0	-1	2
(175 kW/m):	9	3	/	-2	-1	3	0	1	0	1	10	0	10	9	-2	1	4	-4
Evenness (30 kW/m):	.14	-.17	/	.24	.53	.58	.21	.02	.20	.12	.16	.18	.00	.15	.01	.30	.08	-.13
(175 kW/m):	-.01	.05	/	.33	.36	.62	.40	.12	.26	.17	.14	.08	-.07	-.04	-.00	.51	-0.2	-.12

Table 3. Total numbers of ants, number of species of ants, and species evenness for the Victoria burn and control plots. The differences between the burn values and control values are also shown. The 175 kW/m fire was burnt on 29/3/78. The data are presented in the same way as for Table 2.

Weeks:	-6.1 /	0.1	3.0	8.7	12.7	16.7	21.7	25.7	29.7	34.7	39.1	44.0	47.9	52.0	56.0
Months:	Feb /	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Feb	Feb	Mar	Apr
TOTAL ANTS															
Control:	357 /	191	89	32	13	19	67	26	77	68	130	151	94	47	27
Burn (175 kW/m):	229 /	190	254	35	24	14	27	24	91	70	55	275	168	62	31
TOTAL SPECIES															
Control:	18 /	18	22	12	5	11	10	12	11	15	17	14	15	13	9
Burn (175 kW/m):	19 /	22	20	14	10	8	9	13	17	13	10	23	24	15	13
EVENNESS															
Control:	.80 /	.57	.92	.85	.82	.91	.68	.85	.72	.82	.73	.84	.69	.77	.83
Burn (175 kW/m):	.88 /	.84	.71	.85	.80	.85	.78	.91	.77	.84	.64	.76	.86	.89	.89
DIFFERENCES (Burn - Control)															
=====															
Total Ant Individuals:	-128 /	-1	165	3	11	-5	-40	-2	14	2	-75	124	74	15	4
Total Ant Species:	1 /	4	-2	2	5	-3	-1	1	6	-2	-7	9	9	2	4
Evenness:	.09 /	.27	-.21	.00	-.02	-.06	.10	.06	.04	.02	-.09	-.08	.17	.12	.06

Table 4. Total numbers of ants, number of species of ants, and species evenness for the Curaru burn and control plots. The differences between the burn values and control values are also shown. The 500 kW/m fire was burnt on 22/3/76. The data are presented in the same way as for Table 2.

Weeks:	-3.3	-1.4	3.0	5.6	6.6	10.6	14.6	18.6	22.6	26.6	34.7	38.4	42.4	47.	51.	55.	96.	148.
Months:	Feb	Mar	Apr	May	May	May	Jun	Jul	Aug	Aug	Sep	Nov	Dec	Jan	Feb	Mar	Apr	Jan
TOTAL ANTS																		
Control:	138	45	52	55	65	30	21	39	36	104	84	148	98	84	79	60	149	283
Burn (500 kW/m):	43	33	32	185	65	45	70	52	21	48	58	108	162	125	82	49	139	195
TOTAL SPECIES																		
Control:	10	10	13	10	10	8	5	9	8	19	14	20	18	19	14	11	13	15
Burn (500 kW/m):	11	10	11	18	11	5	12	6	4	8	7	15	16	13	13	9	14	11
EVENNESS																		
Control:	0.61	0.74	0.83	0.79	0.64	0.55	0.75	0.84	0.84	0.75	0.68	0.91	0.85	0.83	0.84	0.82	0.82	0.88
Burn (500 kW):	0.79	0.93	0.79	0.60	0.67	0.76	0.55	0.39	0.59	0.83	0.75	0.71	0.76	0.74	0.77	0.80	0.80	0.90
DIFFERENCES (Burn - Control)																		
=====																		
Total Ants:	-95	-12	-20	130	0	15	49	-19	-15	-56	-26	-40	64	41	3	-11	-10	-88
Total Species:	1	0	-2	8	1	-3	7	-3	-4	-11	-7	-5	-2	-6	-1	-2	1	-4
Evenness:	.18	.19	-.04	-.13	.03	.21	-.20	-.45	-.25	.08	.07	-.20	-.09	-.09	-.07	-.02	-.02	.02

Table 5. Total numbers of ants, number of species of ants, and species evenness for the Pindalup burn and control plots. The differences between the burn values and control values are also shown. The 1500 kW/m fire was burnt on 21/11/76. The data are presented in the same way as for Table 2.

Weeks:	-1.0	/	1.0	3.0	7.0	11.7	15.7	19.7	24.1	29.0	33.3	37.6	41.9	46.0	50.0	60.0	112.
Months:	Nov	/	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Jan	Jan	Jan
TOTAL ANTS																	
Control:	122	/	176	104	162	132	85	59	52	81	41	106	62	133	134	210	273
Burn (1500 kW/m):	38	/	175	100	277	295	273	136	209	24	20	40	39	39	131	495	490
TOTAL SPECIES																	
Control:	13	/	17	16	24	16	14	12	14	7	7	11	10	13	17	15	12
Burn (1500 kW/m):	13	/	22	15	21	25	24	20	10	10	6	5	8	11	13	17	13
EVENNESS																	
Control:	.75	/	.74	.72	.61	.85	.85	.83	.81	.56	.61	.69	.69	.66	.81	.82	.94
Burn (1500 kW/m):	.86	/	.78	.84	.79	.78	.70	.65	.59	.76	.78	.82	.67	.81	.85	.75	.76
DIFFERENCES (Burn - Control)																	
=====																	
Total Ant Individuals:	-84	/	-1	-4	115	163	198	77	157	-57	-21	-66	-23	-94	-3	285	217
Total Ant Species:	0	/	5	-1	-3	9	10	8	-4	3	-1	-6	-2	-2	-4	2	1
Evenness:	.11	/	.03	.12	.18	-.67	-.16	-.18	-.22	.20	.17	.13	-.03	.14	.04	-.08	-.18

IMPORTANCE CONTROL

LOCATION: PLAVINS DAY OF BURN WITHIN YEAR OF BURN 99

4-7 MAR	0-7 APR	0-3 APR	4-3 MAY
1. MONOMORIUM SP. 1 (ANIC) 2. IRIDOMYRMEX CONIFER 3. IRIDOMYRMEX DARWINIANUS 4. CAMPONOTUS MICHAELSENI 5. LEPTOGENYS SP. J.D.M. 88 6. MONOMORIUM SP. 2 (ANIC) 6. MONOMORIUM SP. 3 (ANIC) 6. MERANOPLUS SP. 12 (ANIC)	1. IRIDOMYRMEX DARWINIANUS 2. MONOMORIUM SP. 1 (ANIC) 3. CAMPONOTUS MICHAELSENI 4. IRIDOMYRMEX CONIFER 5. CREMATOGASTER SP. 3 (ANIC) 6. MERANOPLUS SP. 12 (ANIC) 7. MYRMEDIA SP. J.D.M. 87	1. IRIDOMYRMEX DARWINIANUS 2. MONOMORIUM SP. 1 (ANIC) 3. IRIDOMYRMEX CONIFER 4. STIGMACROS SP. J.D.M. 115 5. MELOPHORUS SP. 7 (ANIC) 5. CREMATOGASTER SP. 3 (ANIC) 6. MONOMORIUM SP. 3 (ANIC) 6. MERANOPLUS SP. 12 (ANIC)	1. IRIDOMYRMEX DARWINIANUS 2. IRIDOMYRMEX CONIFER 3. CAMPONOTUS MICHAELSENI 4. PROLASIUS SP. 3 (ANIC) 5. CAMPONOTUS ? OBNIGER 5. CREMATOGASTER SP. 3 (ANIC) 5. LEPTOGENYS SP. J.D.M. 88 5. IRIDOMYRMEX GLABER
3-3 JUN	12-7 JUL	18-7 AUG	22-3 SEP
1. IRIDOMYRMEX DARWINIANUS 2. CAMPONOTUS MICHAELSENI 3. CREMATOGASTER SP. 3 (ANIC) 3. IRIDOMYRMEX CONIFER	1. IRIDOMYRMEX DARWINIANUS 2. CREMATOGASTER SP. 6 (ANIC) 3. PROLASIUS SP. 3 (ANIC) 3. CAMPONOTUS MICHAELSENI	1. IRIDOMYRMEX DARWINIANUS 2. HETEROPONERA SP. J.D.M. 92 2. IRIDOMYRMEX CONIFER 2. CAMPONOTUS MICHAELSENI 2. CREMATOGASTER SP. 6 (ANIC)	1. IRIDOMYRMEX DARWINIANUS 2. IRIDOMYRMEX SP. 20 (ANIC) 3. IRIDOMYRMEX CONIFER 3. CREMATOGASTER SP. 6 (ANIC) 4. CAMPONOTUS MICHAELSENI 5. PROLASIUS SP. 3 (ANIC) 5. MONOMORIUM SP. 1 (ANIC) 5. IRIDOMYRMEX SP. 19 (ANIC)
28-3 CCT	32-9 NOV	35-3 DEC	40-3 JAN
1. IRIDOMYRMEX DARWINIANUS 2. IRIDOMYRMEX CONIFER 3. IRIDOMYRMEX GLABER 4. CREMATOGASTER SP. 6 (ANIC) 5. LEPTOGENYS SP. J.D.M. 88 6. MONOMORIUM SP. 1 (ANIC) 7. PROLASIUS SP. 3 (ANIC) 7. CAMPONOTUS ? OBNIGER	1. IRIDOMYRMEX CONIFER 2. IRIDOMYRMEX DARWINIANUS 3. LEPTOGENYS SP. J.D.M. 88 4. MONOMORIUM SP. 1 (ANIC) 5. CREMATOGASTER SP. 3 (ANIC) 5. IRIDOMYRMEX GLABER 5. MELOPHORUS SP. 3 (ANIC) 5. MELOPHORUS SP. 2 (ANIC)	1. CREMATOGASTER SP. 6 (ANIC) 2. IRIDOMYRMEX CONIFER 3. IRIDOMYRMEX DARWINIANUS 4. EUBOTHROPONERA SP. J.D.M. 89 5. CAMPONOTUS MICHAELSENI 6. MONOMORIUM SP. 1 (ANIC) 7. IRIDOMYRMEX GLABER 8. STIGMACROS SP. J.D.M. 113	1. IRIDOMYRMEX DARWINIANUS 2. IRIDOMYRMEX CONIFER 3. MONOMORIUM SP. 1 (ANIC) 4. CAMPONOTUS MICHAELSENI 5. MELOPHORUS SP. 3 (ANIC) 6. MELOPHORUS SP. 7 (ANIC) 7. MERANOPLUS SP. 12 (ANIC) 7. LEPTOGENYS SP. J.D.M. 88
45-3 FEB	47-0 MAR	52-0 APR	103-0 APR
1. MONOMORIUM SP. 1 (ANIC) 2. IRIDOMYRMEX DARWINIANUS 3. MELOPHORUS SP. 3 (ANIC) 4. MELOPHORUS SP. 7 (ANIC) 4. CAMPONOTUS MICHAELSENI 5. LEPTOGENYS SP. J.D.M. 88 6. IRIDOMYRMEX GLABER 6. IRIDOMYRMEX CONIFER	1. IRIDOMYRMEX DARWINIANUS 2. MONOMORIUM SP. 1 (ANIC) 3. IRIDOMYRMEX CONIFER 3. MELOPHORUS SP. 3 (ANIC) 4. CAMPONOTUS MICHAELSENI 5. STIGMACROS SP. J.D.M. 113 5. LEPTOGENYS SP. J.D.M. 88 6. IRIDOMYRMEX GLABER	1. IRIDOMYRMEX DARWINIANUS 2. CAMPONOTUS MICHAELSENI 3. MONOMORIUM SP. 1 (ANIC) 4. IRIDOMYRMEX CONIFER 5. LEPTOGENYS SP. J.D.M. 88 6. STIGMACROS SP. J.D.M. 113 7. STIGMACROS SP. J.D.M. 115 7. CAMPONOTUS ? OBNIGER	1. IRIDOMYRMEX CONIFER 2. IRIDOMYRMEX DARWINIANUS 3. IRIDOMYRMEX SP. J.D.M. 353 3. CAMPONOTUS SP. J.D.M. 199 3. LEPTOGENYS SP. J.D.M. 88 3. MONOMORIUM SP. 1 (ANIC) 4. IRIDOMYRMEX GLABER 4. CREMATOGASTER SP. 6 (ANIC)
150-0 FEB	202-0 FEB		
1. MONOMORIUM SP. 1 (ANIC) 2. IRIDOMYRMEX CONIFER 3. LEPTOGENYS SP. J.D.M. 88 4. MELOPHORUS SP. 3 (ANIC) 5. IRIDOMYRMEX DARWINIANUS 6. CAMPONOTUS SP. J.D.M. 199 7. CREMATOGASTER SP. 3 (ANIC) 8. MERANOPLUS SP. J.D.M. 207	1. MONOMORIUM SP. 1 (ANIC) 2. IRIDOMYRMEX DARWINIANUS 3. MELOPHORUS SP. J.D.M. 142 3. IRIDOMYRMEX CONIFER 4. CREMATOGASTER SP. 3 (ANIC) 4. CREMATOGASTER SP. 6 (ANIC) 5. CAMPONOTUS ? OBNIGER 5. CAMPONOTUS MICHAELSENI		

IMPORTANCE

BURN INTENSITY WAS 30 KW/M

LOCATION: PLAVINS DAY OF BURN WITHIN YEAR OF BURN 99

4.3

MAY

1. IRIDOMYRMEX DARWINIANUS
2. CAMPONOTUS MICHAELSENI
3. IRIDOMYRMEX SP. 20 (ANIC)
3. RHYTIDOPONERA INORNATA
4. PROLASIUS SP. 3 (ANIC)
4. MONOMORIUM SP. 3 (ANIC)
4. IRIDOMYRMEX SP. 21 (ANIC)
5. MONOMORIUM SP. 2 (ANIC)

22.3

SEP

1. IRIDOMYRMEX DARWINIANUS
2. IRIDOMYRMEX SP. 20 (ANIC)
3. RHYTIDOPONERA INORNATA
4. PROLASIUS SP. 3 (ANIC)
4. MONOMORIUM SP. 3 (ANIC)
4. CREMATOGASTER SP. 3 (ANIC)
4. CAMPONOTUS MICHAELSENI

18.7

AUG

1. IRIDOMYRMEX DARWINIANUS
2. PROLASIUS SP. 3 (ANIC)
2. IRIDOMYRMEX SP. 21 (ANIC)
2. IRIDOMYRMEX SP. 20 (ANIC)
2. CAMPONOTUS MICHAELSENI
2. MONOMORIUM SP. 1 (ANIC)
2. RHYTIDOPONERA INORNATA

12.7

JUL

1. IRIDOMYRMEX DARWINIANUS
2. RHYTIDOPONERA INORNATA
3. IRIDOMYRMEX SP. 20 (ANIC)
4. CAMPONOTUS MICHAELSENI
5. IRIDOMYRMEX GLABER

8.3

JUN

1. IRIDOMYRMEX DARWINIANUS
2. RHYTIDOPONERA INORNATA
3. TETRAMORIUM SP. 6 (ANIC)
3. LEPTOGENYS SP. J.D.M. 88
3. CAMPONOTUS MICHAELSENI
3. IRIDOMYRMEX SP. 19 (ANIC)

28.3

CCT

1. IRIDOMYRMEX DARWINIANUS
2. IRIDOMYRMEX SP. 20 (ANIC)
3. RHYTIDOPONERA INORNATA
4. LEPTOGENYS SP. J.D.M. 88
5. IRIDOMYRMEX SP. 21 (ANIC)
5. IRIDOMYRMEX CONIFER
6. CREMATOGASTER SP. 3 (ANIC)
6. MONOMORIUM SP. 1 (ANIC)

32.9

NOV

1. IRIDOMYRMEX DARWINIANUS
2. MONOMORIUM SP. 1 (ANIC)
3. IRIDOMYRMEX SP. 21 (ANIC)
3. MELOPHORUS SP. 3 (ANIC)
4. IRIDOMYRMEX SP. 20 (ANIC)
5. RHYTIDOPONERA INORNATA
6. IRIDOMYRMEX SP. 19 (ANIC)
7. CAMPONOTUS MICHAELSENI

35.3

DEC

1. IRIDOMYRMEX DARWINIANUS
2. MONOMORIUM SP. 1 (ANIC)
3. IRIDOMYRMEX SP. 21 (ANIC)
3. IRIDOMYRMEX SP. 19 (ANIC)
4. MELOPHORUS SP. 3 (ANIC)
5. MELOPHORUS SP. 1 (ANIC)
6. RHYTIDOPONERA INORNATA
7. MONOMORIUM SP. 3 (ANIC)

40.3

JAN

1. MONOMORIUM SP. 1 (ANIC)
2. IRIDOMYRMEX DARWINIANUS
3. CAMPONOTUS MICHAELSENI
4. TETRAMORIUM SP. 5 (ANIC)
4. RHYTIDOPONERA INORNATA
5. MONOMORIUM SP. 3 (ANIC)
6. MELOPHORUS SP. 3 (ANIC)
7. IRIDOMYRMEX SP. 20 (ANIC)

45.3

FEB

1. MONOMORIUM SP. 1 (ANIC)
2. IRIDOMYRMEX DARWINIANUS
3. RHYTIDOPONERA INORNATA
4. TETRAMORIUM SP. 5 (ANIC)
5. MONOMORIUM SP. 3 (ANIC)
5. MELOPHORUS SP. 3 (ANIC)
6. CAMPONOTUS MICHAELSENI
7. MERANOPLUS SP. 12 (ANIC)

47.0

MAR

1. MONOMORIUM SP. 1 (ANIC)
2. IRIDOMYRMEX DARWINIANUS
3. CAMPONOTUS MICHAELSENI
3. MELOPHORUS SP. 3 (ANIC)
4. MONOMORIUM SP. 2 (ANIC)
5. MERANOPLUS SP. 12 (ANIC)
6. MONOMORIUM SP. 3 (ANIC)
7. RHYTIDOPONERA INORNATA

52.0

APR

1. CAMPONOTUS MICHAELSENI
2. IRIDOMYRMEX DARWINIANUS
3. MONOMORIUM SP. 2 (ANIC)
4. RHYTIDOPONERA INORNATA
5. LEPTOGENYS SP. J.C.M. 88
6. TETRAMORIUM SP. 5 (ANIC)
7. TRACHYMESOPUS RUFONIGRA
7. MELOPHORUS SP. 3 (ANIC)

103.0

APR

1. IRIDOMYRMEX DARWINIANUS
2. CAMPONOTUS SP. J.D.M. 199
3. MONOMORIUM SP. J.D.M. 102
4. CAMPONOTUS MICHAELSENI
5. MONOMORIUM SP. 1 (ANIC)
6. TETRAMORIUM SP. 6 (ANIC)
6. LEPTOGENYS SP. J.D.M. 88
6. MELOPHORUS SP. 3 (ANIC)

150.0

FEB

1. MONOMORIUM SP. 1 (ANIC)
2. IRIDOMYRMEX DARWINIANUS
3. IRIDOMYRMEX SP. 21 (ANIC)
4. RHYTIDOPONERA INORNATA
5. TETRAMORIUM SP. 5 (ANIC)
6. MELOPHORUS SP. 7 (ANIC)
7. IRIDOMYRMEX SP. 19 (ANIC)
8. MONOMORIUM SP. J.D.M. 100

202.0

FEB

1. MONOMORIUM SP. 1 (ANIC)
2. MELOPHORUS SP. 3 (ANIC)
3. IRIDOMYRMEX SP. 20 (ANIC)
4. RHYTIDOPONERA INORNATA
5. IRIDOMYRMEX DARWINIANUS
6. MELOPHORUS SP. 1 (ANIC)
7. CAMPONOTUS MICHAELSENI
8. TETRAMORIUM SP. 6 (ANIC)

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IMPORTANCE

BURN INTENSITY WBS 175 KW/M

LOCATION: PLAVINS DAY OF BURN WITHIN YEAR OF BURN 99

-0.7

APR

MAR

-4.7

1. MONOMORIUM SP. 1 (ANIC)
2. IRIDOMYRMEX CNIFER
3. CAMPONOTUS MICHAELSENI
4. MONOMORIUM SP. 3 (ANIC)
5. TETRAMORIUM SP. 5 (ANIC)
6. MONOMORIUM SP. J.D.M. 100
7. IRIDOMYRMEX DARWINIANUS
8. IRIDOMYRMEX SP. 19 (ANIC)

1. CAMPONOTUS MICHAELSENI
2. IRIDOMYRMEX DARWINIANUS
3. MONOMORIUM SP. 3 (ANIC)
4. STIGMACROS SP. J.D.M. 115
4. IRIDOMYRMEX CNIFER
4. RHYTIDOPONERA INORNATA
5. MONOMORIUM SP. 1 (ANIC)

8.3

JUN

1. IRIDOMYRMEX DARWINIANUS
2. RHYTIDOPONERA INORNATA
3. CAMPONOTUS MICHAELSENI

12.7

JUL

1. CAMPONOTUS MICHAELSENI
1. IRIDOMYRMEX DARWINIANUS
2. HYPOONERA ? CONGRUA
2. CAMPONOTUS SP. J.D.M. 107
2. HETEROPONERA SP. J.D.M. 92
2. CREMATOGASTER SP. 6 (ANIC)
2. RHYTIDOPONERA INORNATA

18.7

AUG

1. IRIDOMYRMEX DARWINIANUS
2. CAMPONOTUS SP. J.C.M. 107
2. CAMPONOTUS MICHAELSENI
2. RHYTIDOPONERA INORNATA
2. IRIDOMYRMEX SP. 19 (ANIC)

22.3

SEP

1. IRIDOMYRMEX DARWINIANUS
2. IRIDOMYRMEX SP. 20 (ANIC)
3. STIGMACROS SP. J.D.M. 113
3. MONOMORIUM SP. 3 (ANIC)
3. IRIDOMYRMEX GLABER
3. IRIDOMYRMEX CNIFER
3. CAMPONOTUS MICHAELSENI
3. CAMPONOTUS NR. CLARIPES GP. 63

28.3

CCT

1. IRIDOMYRMEX SP. 19 (ANIC)
2. IRIDOMYRMEX SP. 20 (ANIC)
2. IRIDOMYRMEX CNIFER
3. IRIDOMYRMEX DARWINIANUS
4. CAMPONOTUS MICHAELSENI
5. LEPTOGENYS SP. J.D.M. 88
5. CREMATOGASTER SP. 6 (ANIC)
6. MONOMORIUM SP. 3 (ANIC)

32.9

NOV

1. IRIDOMYRMEX CNIFER
1. IRIDOMYRMEX DARWINIANUS
2. CAMPONOTUS MICHAELSENI
3. MONOMORIUM SP. 3 (ANIC)
3. MONOMORIUM SP. 1 (ANIC)
4. IRIDOMYRMEX SP. 20 (ANIC)
4. RHYTIDOPONERA INORNATA
5. STIGMACROS SP. J.D.M. 113

35.3

DEC

1. IRIDOMYRMEX CNIFER
2. IRIDOMYRMEX DARWINIANUS
3. IRIDOMYRMEX SP. 20 (ANIC)
4. IRIDOMYRMEX SP. 21 (ANIC)
5. MONOMORIUM SP. 1 (ANIC)
6. IRIDOMYRMEX GLABER
6. IRIDOMYRMEX SP. 19 (ANIC)
7. MELOPHORUS SP. 3 (ANIC)

40.3

JAN

1. IRIDOMYRMEX CNIFER
2. MONOMORIUM SP. 1 (ANIC)
3. IRIDOMYRMEX DARWINIANUS
4. CAMPONOTUS MICHAELSENI
5. IRIDOMYRMEX SP. 20 (ANIC)
6. IRIDOMYRMEX SP. 21 (ANIC)
7. MONOMORIUM SP. J.D.M. 100
8. MELOPHORUS SP. 3 (ANIC)

45.3

FEB

1. IRIDOMYRMEX CNIFER
2. MONOMORIUM SP. 1 (ANIC)
3. CAMPONOTUS MICHAELSENI
4. MONOMORIUM SP. 3 (ANIC)
5. IRIDOMYRMEX DARWINIANUS
6. IRIDOMYRMEX SP. 21 (ANIC)
7. IRIDOMYRMEX SP. 20 (ANIC)
7. MELOPHORUS SP. 3 (ANIC)

47.0

MAR

1. MONOMORIUM SP. 1 (ANIC)
2. IRIDOMYRMEX CNIFER
3. MELOPHORUS SP. 3 (ANIC)
4. CAMPONOTUS MICHAELSENI
5. IRIDOMYRMEX SP. 20 (ANIC)
6. STIGMACROS SP. J.D.M. 115
7. IRIDOMYRMEX DARWINIANUS
8. MONOMORIUM SP. 2 (ANIC)

52.0

APR

1. CAMPONOTUS MICHAELSENI
2. MONOMORIUM SP. 1 (ANIC)
3. IRIDOMYRMEX DARWINIANUS
4. IRIDOMYRMEX CNIFER
5. MELOPHORUS SP. 7 (ANIC)
5. MONOMORIUM SP. 2 (ANIC)
5. TRACHYMESOPUS RUFCINIGRA
5. IRIDOMYRMEX SP. 20 (ANIC)

103.0

APR

1. IRIDOMYRMEX DARWINIANUS
2. IRIDOMYRMEX CNIFER
3. IRIDOMYRMEX SP. J.D.M. 353
4. MONOMORIUM SP. J.D.M. 102
4. IRIDOMYRMEX GLABER
5. CAMPONOTUS SP. J.D.M. 199
5. TETRAMORIUM SP. 6 (ANIC)
5. MONOMORIUM SP. 1 (ANIC)

150.0

FEB

1. MONOMORIUM SP. 1 (ANIC)
2. IRIDOMYRMEX SP. 21 (ANIC)
3. MELOPHORUS SP. 3 (ANIC)
4. IRIDOMYRMEX DARWINIANUS
5. CAMPONOTUS SP. J.D.M. 199
6. CAMPONOTUS SP. J.D.M. 107
6. IRIDOMYRMEX GLABER
7. STIGMACROS SP. J.D.M. 375

202.0

FEB

1. MONOMORIUM SP. 1 (ANIC)
2. IRIDOMYRMEX DARWINIANUS
3. CREMATOGASTER SP. 3 (ANIC)
4. RHYTIDOPONERA INORNATA
5. TETRAMORIUM SP. 6 (ANIC)
5. IRIDOMYRMEX GLABER
5. MELOPHORUS SP. 3 (ANIC)

IMPORTANCE CONTROL

LOCATION: VICTORIA DAY OF BURN WITHIN YEAR OF BURN 88

6.1	0.1	MAR	3.0	8.7
FEB	MAR	APR	MAY	
1. CAMPONOTUS SP. J.D.M. 199	1. CAMPONOTUS SP. J.D.M. 199	1. STIGMACROS SP. J.D.M. 188	1. CAMPONOTUS SP. J.D.M. 199	
2. MERANOPLUS SP. 12 (ANIC)	2. IRIDOMYRMEX SP. J.D.M. 449	2. CAMPONOTUS SP. J.D.M. 199	2. PHEIDOLE SP. J.D.M. 399	
3. RHYTIDOPONERA VIOLACEA	3. RHYTIDOPONERA VIOLACEA	3. MELOPHORUS SP. J.D.M. 221	3. IRIDOMYRMEX CONFIFER	
4. MELOPHCRUS SP. 1 (ANIC)	4. MONOMORIUM SP. 2 (ANIC)	4. IRIDOMYRMEX CONFIFER	4. IRIDOMYRMEX DARWINIANUS	
5. IRIDOMYRMEX SP. J.D.M. 449	5. IRIDOMYRMEX SP. 18 (ANIC)	5. IRIDOMYRMEX SP. J.D.M. 449	4. RHYTIDOPONERA VIOLACEA	
6. IRIDOMYRMEX DARWINIANUS	5. MELOPHCRUS SP. J.D.M. 221	5. MONOMORIUM SP. 2 (ANIC)	5. IRIDOMYRMEX SP. J.D.M. 449	
7. PHEIDOLE SP. J.D.M. 399	6. PHEIDOLE SP. J.D.M. 399	5. MELOPHORUS SP. 3 (ANIC)	5. EPOPOSTRUMA SP. J.D.M. 413	
5. IRIDOMYRMEX CONFIFER	6. MERANOPLUS SP. 12 (ANIC)	6. MERANOPLUS SP. 12 (ANIC)	5. STIGMACROS SP. J.D.M. 188	
12.7	16.7	21.7	25.7	
JUN	JUL	AUG	SEP	
1. PHEIDOLE SP. J.D.M. 399	1. IRIDOMYRMEX CONFIFER	1. IRIDOMYRMEX CONFIFER	1. CAMPONOTUS SP. J.D.M. 199	
2. IRIDOMYRMEX CONFIFER	2. NOTONCUS HICKMANI	2. CAMPONOTUS SP. J.D.M. 199	2. PHEIDOLE SP. J.D.M. 399	
3. RHYTIDOPONERA INORNATA	2. IRIDOMYRMEX DARWINIANUS	3. IRIDOMYRMEX SP. 20 (ANIC)	2. IRIDOMYRMEX DARWINIANUS	
4. CAMPONOTUS SP. J.D.M. 199	3. CREMATOGASTER SP. J.D.M. 33	4. IRIDOMYRMEX SP. J.D.M. 449	3. IRIDOMYRMEX CONFIFER	
4. BRACHYPONERA LUTEA	4. PHEIDOLE SP. J.D.M. 399	5. PHEIDOLE SP. J.D.M. 399	3. RHYTIDOPONERA VIOLACEA	
	4. STIGMACROS AEMULA	6. TAPINOMA J.D.M. 134	4. TAPINOMA J.D.M. 134	
	4. CAMPONOTUS SP. J.D.M. 199	6. MERANOPLUS SP. 12 (ANIC)	4. MELOPHORUS SP. J.D.M. 117	
	4. MERANOPLUS SP. 12 (ANIC)	6. CAMPONOTUS SP. J.D.M. 48	4. MERANOPLUS SP. 12 (ANIC)	
29.7	34.7	39.1	44.0	
CCT	NOV	DEC	FEB	
1. IRIDOMYRMEX CONFIFER	1. MELOPHORUS SP. 3 (ANIC)	1. IRIDOMYRMEX PURPUREUS	1. MELOPHORUS SP. 1 (ANIC)	
2. CAMPONOTUS SP. J.D.M. 199	2. MELOPHCRUS SP. 1 (ANIC)	2. MELOPHORUS SP. 3 (ANIC)	2. IRIDOMYRMEX SP. J.D.M. 449	
3. RHYTIDOPONERA VIOLACEA	3. IRIDOMYRMEX SP. 18 (ANIC)	3. MELOPHORUS SP. 1 (ANIC)	2. CAMPONOTUS SP. J.D.M. 199	
4. MELOPHCRUS SP. J.D.M. 221	4. IRIDOMYRMEX SP. 20 (ANIC)	4. MELOPHORUS SP. J.D.M. 221	3. MELOPHORUS SP. 3 (ANIC)	
5. MELOPHORUS SP. 3 (ANIC)	4. IRIDOMYRMEX CONFIFER	5. CAMPONOTUS SP. J.D.M. 199	4. RHYTIDOPONERA VIOLACEA	
6. MONOMORIUM SP. J.D.M. 198	5. MELOPHCRUS SP. J.D.M. 221	5. RHYTIDOPONERA VIOLACEA	5. MELOPHORUS SP. J.D.M. 221	
6. MERANOPLUS SP. 12 (ANIC)	5. CAMPONOTUS SP. J.D.M. 199	6. MONOMORIUM SP. 2 (ANIC)	5. IRIDOMYRMEX CONFIFER	
7. HETEROPONERA IMBELLIS	6. STIGMACROS AEMULA	7. MONOMORIUM SP. 1 (ANIC)	6. MERANOPLUS SP. 12 (ANIC)	
47.5	52.0	56.0		
FEB	MAR	APR		
1. IRIDOMYRMEX SP. J.D.M. 449	1. IRIDOMYRMEX SP. 19 (ANIC)	1. CAMPONOTUS SP. J.D.M. 199		
2. RHYTIDOPONERA VIOLACEA	2. IRIDOMYRMEX SP. J.D.M. 449	2. IRIDOMYRMEX SP. J.D.M. 449		
3. CAMPONOTUS SP. J.D.M. 199	2. RHYTIDOPONERA VIOLACEA	2. RHYTIDOPONERA VIOLACEA		
4. MONOMORIUM SP. 2 (ANIC)	3. CAMPONOTUS SP. J.D.M. 199	3. IRIDOMYRMEX DARWINIANUS		
5. MELOPHCRUS SP. J.D.M. 221	4. PHEIDOLE SP. J.D.M. 399	4. IRIDOMYRMEX SP. 19 (ANIC)		
5. MELOPHCRUS SP. 3 (ANIC)	5. TAPINOMA J.D.M. 134	5. PHEIDOLE SP. J.D.M. 399		
6. TETRACORIUM SP. J.D.M. 458	5. MONOMORIUM SP. 2 (ANIC)	5. TAPINOMA J.D.M. 134		
6. CAMPONOTUS SP. J.D.M. 357	6. STIGMACROS AEMULA	5. IRIDOMYRMEX CONFIFER		

Table 10. The most dominant ant species in samples taken from Victoria 175 kW/m burn plot. Ants were caught in pitfall traps run for 7-day periods at approximately monthly intervals. The data are presented as for Table 6. Refer to Table C5 for all dominance ranking details for the plot.

Table 11. The most dominant ant species in samples taken from Curaru control plot. Ants were caught in pitfall traps run for 7-day periods at approximately monthly intervals. The data are presented as for Table 6. Refer to Table C6 for all dominance ranking details for the plot.

Table 12. The most dominant ant species in samples taken from Curaru 500 kW/m burn plot. Ants were caught in pitfall traps run for 7-day periods at approximately monthly intervals. The data are presented as for Table 6. Refer to Table C7 for all dominance ranking details for the plot.

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LOCATION: CURARU DAY OF BURN WITHIN YEAR OF BURN 82 IMPORTANCE BURN INTENSITY WAS 500 KW/M

5.6

MAY

3.0

APR

1. IRIDOMYRMEX DARWINIANUS
2. RHYTIDOPONERA INORNATA
3. CAMPONOTUS ? OBNIER
4. MONOMORIUM SP. 2 (ANIC)
5. MONOMORIUM SP. 1 (ANIC)
6. MONOMORIUM SP. J.D.M. 102
7. PROLASIUS SP. 3 (ANIC)
8. CAMPONOTUS SP. J.D.M. 199

18.6

AUG

1. IRIDOMYRMEX DARWINIANUS
2. PROLASIUS SP. 3 (ANIC)
3. PHEIDOLE LATIGENA
4. IRIDOMYRMEX GLABER
4. RHYTIDOPONERA INORNATA
4. IRIDOMYRMEX SP. 19 (ANIC)

38.4

DEC

1. MONOMORIUM SP. 1 (ANIC)
2. IRIDOMYRMEX DARWINIANUS
3. RHYTIDOPONERA INORNATA
4. MELOPHCRUS SP. 3 (ANIC)
5. PHEIDOLE LATIGENA
6. MONOMORIUM SP. 2 (ANIC)
7. MELOPHCRUS SP. J.D.M. 209
7. MELOPHCRUS SP. 7 (ANIC)

55.0

APR

1. MONOMORIUM SP. J.D.M. 100
2. IRIDOMYRMEX DARWINIANUS
3. RHYTIDOPONERA INORNATA
4. MONOMORIUM SP. 1 (ANIC)
5. MONOMORIUM SP. J.D.M. 102
6. STIGMACROS SP. J.D.M. 115
7. LEPTOGENYS SP. J.D.M. 88
7. MELOPHCRUS SP. 2 (ANIC)

1. IRIDOMYRMEX DARWINIANUS
2. MONOMORIUM SP. 2 (ANIC)
3. PHEIDOLE LATIGENA
4. MELOPHCRUS SP. 3 (ANIC)
4. MONOMORIUM SP. 1 (ANIC)
5. CAMPONOTUS SP. J.D.M. 199
5. STIGMACROS SP. J.C.M. 115
5. MELOPHCRUS SP. 7 (ANIC)

14.6

JUL

1. IRIDOMYRMEX DARWINIANUS
2. PROLASIUS SP. 3 (ANIC)
3. RHYTIDOPONERA INORNATA
4. TRACHYMESOPUS RUFCIGRA
4. PHEIDOLE LATIGENA
5. HYPOPONERA ? CONGRUA
5. HETEROPONERA IMBELLIS
5. STIGMACROS SP. J.D.M. 115

34.4

NOV

1. IRIDOMYRMEX DARWINIANUS
2. RHYTIDOPONERA INORNATA
3. MONOMORIUM SP. 1 (ANIC)
4. MONOMORIUM SP. J.C.M. 102
5. MELOPHCRUS SP. 7 (ANIC)
6. LEPTOGENYS SP. J.D.M. 88
6. IRIDOMYRMEX SP. 19 (ANIC)

51.0

MAR

1. MONOMORIUM SP. J.C.M. 100
2. MONOMORIUM SP. 1 (ANIC)
3. MELOPHCRUS SP. 7 (ANIC)
4. MONOMORIUM SP. J.D.M. 102
5. RHYTIDOPONERA INORNATA
6. IRIDOMYRMEX DARWINIANUS
7. MELOPHCRUS SP. 3 (ANIC)
3. MYRMEDIA SP. J.D.M. 153

1. MELOPHCRUS SP. 3 (ANIC)
2. IRIDOMYRMEX DARWINIANUS
3. RHYTIDOPONERA INORNATA
4. MONOMORIUM SP. 3 (ANIC)
4. ANISOPHEIDOLE ANTIPODUM
4. MELOPHCRUS SP. 2 (ANIC)
4. MONOMORIUM SP. 1 (ANIC)
5. MELOPHCRUS SP. 7 (ANIC)

10.6

JUN

1. IRIDOMYRMEX DARWINIANUS
2. PHEIDOLE LATIGENA
3. RHYTIDOPONERA INORNATA
4. PROLASIUS SP. 3 (ANIC)
5. IRIDOMYRMEX SP. 19 (ANIC)

26.6

SEP

1. IRIDOMYRMEX DARWINIANUS
2. RHYTIDOPONERA INORNATA
3. LEPTOGENYS SP. J.D.M. 88
4. IRIDOMYRMEX SP. 19 (ANIC)
5. CAMPONOTUS MICHAELSENI
6. MONOMORIUM SP. 1 (ANIC)
7. PROLASIUS SP. 3 (ANIC)
7. PHEIDOLE LATIGENA

47.0

FEB

1. RHYTIDOPONERA INORNATA
2. MONOMORIUM SP. 1 (ANIC)
3. MONOMORIUM SP. J.C.M. 100
4. MELOPHCRUS SP. 7 (ANIC)
4. LEPTOGENYS SP. J.D.M. 88
5. PHEIDOLE LATIGENA
6. CAMPONOTUS MICHAELSENI
6. MELOPHCRUS SP. 3 (ANIC)

148.0

JAN

1. IRIDOMYRMEX SP. 18 (ANIC)
2. RHYTIDOPONERA INORNATA
3. CAMPONOTUS SP. J.D.M. 199
4. MONOMORIUM SP. 1 (ANIC)
5. MELOPHCRUS SP. J.D.M. 112
6. MONOMORIUM SP. J.D.M. 102
6. IRIDOMYRMEX DARWINIANUS
7. MELOPHCRUS SP. 3 (ANIC)

1. RHYTIDOPONERA INORNATA
2. LEPTOGENYS SP. J.D.M. 88
3. IRIDOMYRMEX DARWINIANUS
4. MONOMORIUM SP. 3 (ANIC)
4. MONOMORIUM SP. 1 (ANIC)
5. CAMPONOTUS MICHAELSENI
5. MELOPHCRUS SP. 2 (ANIC)
6. PROLASIUS SP. 3 (ANIC)

6.6

MAY

1. IRIDOMYRMEX DARWINIANUS
2. STIGMACROS SP. J.D.M. 115
3. MONOMORIUM SP. J.D.M. 102
3. MONOMORIUM SP. 1 (ANIC)
4. RHYTIDOPONERA INORNATA
5. PROLASIUS SP. 3 (ANIC)
5. LEPTOGENYS SP. J.D.M. 88
5. IRIDOMYRMEX SP. 19 (ANIC)

22.6

AUG

1. IRIDOMYRMEX DARWINIANUS
2. RHYTIDOPONERA INORNATA
3. MONOMORIUM SP. J.D.M. 102
3. MELOPHCRUS SP. 2 (ANIC)

42.4

JAN

1. MONOMORIUM SP. 1 (ANIC)
2. RHYTIDOPONERA INORNATA
3. IRIDOMYRMEX DARWINIANUS
4. MELOPHCRUS SP. 3 (ANIC)
5. MELOPHCRUS SP. 7 (ANIC)
6. PHEIDOLE LATIGENA
7. MONOMORIUM SP. J.D.M. 102
8. LEPTOGENYS SP. J.D.M. 88

96.C

JAN

1. RHYTIDOPONERA INORNATA
2. MONOMORIUM SP. 1 (ANIC)
3. IRIDOMYRMEX DARWINIANUS
4. MELOPHCRUS SP. 7 (ANIC)
5. MONOMORIUM SP. J.D.M. 100
6. MELOPHCRUS SP. 3 (ANIC)
7. RHYTIDOPONERA VIOLACEA
8. PHEIDOLE LATIGENA

Table 13. The most dominant ant species in samples taken from Pindalup control plot. Ants were caught in pitfall traps run for 7-day periods at approximately monthly intervals. The data are presented as for Table 6. Refer to Table C8 for all dominance ranking details for the plot.

IMPORTANCE CONTROL

LOCATION: PINCALLP DAY OF BURN WITHIN YEAR OF BURN 329

1-6	1-0	3-0	7-0
NOV	DEC	DEC	JAN
1-IRIDOMYRMEX DARWINIANUS	1-CAMPONOTUS SP. J.D.M. 199	1-IRIDOMYRMEX DARWINIANUS	1-IRIDOMYRMEX DARWINIANUS
2-CAMPONOTUS SP. J.D.M. 199	2-IRIDOMYRMEX DARWINIANUS	2-MELOPHORUS SP.3 (ANIC)	2-RHYTIDOPONERA INORNATA
3-RHYTIDOPONERA INORNATA	3-CREMATOGASTER SP.6 (ANIC)	3-RHYTIDOPONERA INORNATA	3-TETRAMORIUM SP.5 (ANIC)
4-MELOPHORUS SP.3 (ANIC)	4-RHYTIDOPONERA INORNATA	4-CAMPONOTUS SP. J.C.M. 199	4-MELOPHORUS SP.3 (ANIC)
5-CREMATOGASTER SP.3 (ANIC)	5-MONOMORIUM SP. J.D.M. 102	5-MONOMORIUM SP. J.D.M. 102	5-CAMPONOTUS SP. J.D.M. 199
6-TETRAMORIUM SP.12 (ANIC)	6-MELOPHORUS SP.7 (ANIC)	6-MELOPHORUS SP.7 (ANIC)	5-IRIDOMYRMEX GLABER
7-MELOPHORUS SP.7 (ANIC)	6-IRIDOMYRMEX GLABER	7-CREMATOGASTER SP.6 (ANIC)	6-MELOPHORUS SP.7 (ANIC)
	7-CREMATOGASTER SP.3 (ANIC)	7-TETRAMORIUM SP.5 (ANIC)	6-CAMPONOTUS MICHAELSENI
11.7	15.7	19.7	24.1
FEB	MAR	APR	MAY
1-TETRAMORIUM SP.5 (ANIC)	1-MONOMORIUM SP. J.D.M. 100	1-IRIDOMYRMEX DARWINIANUS	1-IRIDOMYRMEX DARWINIANUS
1-RHYTIDOPONERA VIOLACEA	2-MELOPHORUS SP.3 (ANIC)	2-MONOMORIUM SP. J.D.M. 100	2-RHYTIDOPONERA INORNATA
2-CAMPONOTUS SP. J.D.M. 199	3-TETRAMORIUM SP.5 (ANIC)	3-CAMPONOTUS SP. J.D.M. 199	3-IRIDOMYRMEX SP.19 (ANIC)
3-MONOMORIUM SP. J.D.M. 102	4-CAMPONOTUS SP. J.D.M. 199	4-MELOPHORUS SP.3 (ANIC)	4-MONOMORIUM SP. J.D.M. 100
4-MELOPHORUS SP.3 (ANIC)	5-MONOMORIUM SP.1 (ANIC)	5-MELOPHORUS SP.1 (ANIC)	5-TRACHYMESOPUS RUFONIGRA
4-IRIDOMYRMEX DARWINIANUS	6-MELOPHORUS SP.7 (ANIC)	5-RHYTIDOPONERA INORNATA	6-MERANOPUS SP. J.D.M. 158
4-MONOMORIUM SP.1 (ANIC)	7-IRIDOMYRMEX DARWINIANUS	6-CAMPONOTUS NR. CLARIPES GP.110	6-CAMPONOTUS NR. CLARIPES GP.110
5-MERANOPUS SP.11 (ANIC)	7-RHYTIDOPONERA VIOLACEA	6-IRIDOMYRMEX GLABER	7-CAMPONOTUS SP. J.D.M. 199
29.0	33.3	37.6	41.9
JUN	JUL	AUG	SEP
1-IRIDOMYRMEX DARWINIANUS	1-IRIDOMYRMEX DARWINIANUS	1-IRIDOMYRMEX DARWINIANUS	1-IRIDOMYRMEX DARWINIANUS
2-CREMATOGASTER SP.6 (ANIC)	2-CREMATOGASTER SP.6 (ANIC)	2-CREMATOGASTER SP.6 (ANIC)	2-PHEIDOLE LATIGENA
3-CAMPONOTUS SP. J.D.M. 109	3-PHEIDOLE LATIGENA	3-PROLASIUS SP. 3 (ANIC)	3-CREMATOGASTER SP.6 (ANIC)
4-RHYTIDOPONERA INORNATA	4-STIGMACROS SP. J.D.M. 113	4-MERANOPUS SP.11 (ANIC)	4-TETRAMORIUM SP.5 (ANIC)
5-PROLASIUS SP. 3 (ANIC)	4-MONOMORIUM SP. J.D.M. 102	5-PHEIDOLE LATIGENA	4-RHYTIDOPONERA INORNATA
5-CAMPONOTUS ? OENIGER	4-IRIDOMYRMEX GLABER	5-IRIDOMYRMEX SP.19 (ANIC)	5-CAMPONOTUS SP. J.D.M. 199
5-MERANOPUS SP.11 (ANIC)	4-IRIDOMYRMEX SP.19 (ANIC)	6-RHYTIDOPONERA INORNATA	5-MELOPHORUS SP. J.D.M. 112
46.0	50.0	60.0	112.0
CCT	NOV	JAN	JAN
1-IRIDOMYRMEX DARWINIANUS	1-IRIDOMYRMEX DARWINIANUS	1-CAMPONOTUS SP. J.D.M. 199	1-CAMPONOTUS SP. J.D.M. 199
2-CREMATOGASTER SP.3 (ANIC)	2-MONOMORIUM SP. J.D.M. 100	2-TETRAMORIUM SP.5 (ANIC)	2-MELOPHORUS SP.3 (ANIC)
3-CAMPONOTUS SP. J.D.M. 199	3-MONOMORIUM SP.1 (ANIC)	3-MONOMORIUM SP. J.C.M. 100	3-TETRAMORIUM SP.5 (ANIC)
4-RHYTIDOPONERA INORNATA	4-MELOPHORUS SP.3 (ANIC)	4-MONOMORIUM SP.1 (ANIC)	4-MELOPHORUS SP. J.D.M. 112
5-PROLASIUS SP. 3 (ANIC)	5-MONOMORIUM SP. J.D.M. 102	5-MELOPHORUS SP.3 (ANIC)	5-RHYTIDOPONERA VIOLACEA
6-PHEIDOLE LATIGENA	6-MERANOPUS SP.12 (ANIC)	6-RHYTIDOPONERA VIOLACEA	6-IRIDOMYRMEX DARWINIANUS
6-IRIDOMYRMEX SP.19 (ANIC)	7-MELOPHORUS SP. J.D.M. 112	7-MELOPHORUS SP.7 (ANIC)	7-MONOMORIUM SP.1 (ANIC)
7-IRIDOMYRMEX GLABER	8-CREMATOGASTER SP.3 (ANIC)	7-RHYTIDOPONERA INORNATA	8-MONOMORIUM SP. J.D.M. 102

Table 14. The most dominant ant species in samples taken from Pindalup 1500 KW/m burn plot. Ants were caught in pitfall traps run for 7-day periods at approximately monthly intervals. The data are presented as for Table 6. Refer to Table C9 for all dominance ranking details for the plot.

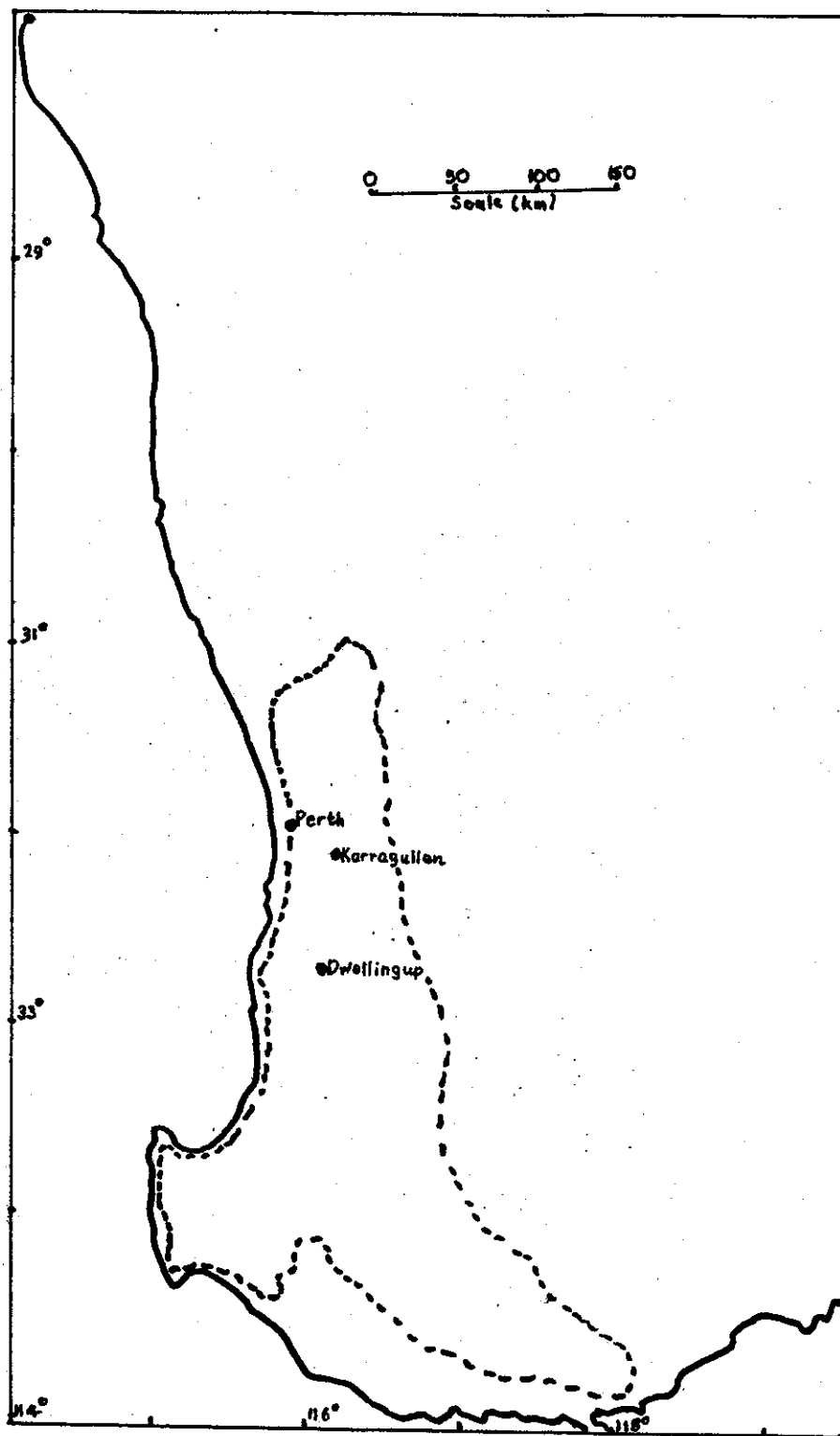


Figure 1. Map of the south-west of Western Australia showing the approximate locations of the plot sites within the boundary of the jarrah (*Eucalyptus marginata*) forest (dotted line).

Fig. 2. Total ants of each species obtained from pitfall trap grids run for 7-day periods at approximately monthly intervals in Plavins control and 30 kW/m burn plots. The horizontal axis is scaled in weeks per centimetre with the origin representing the day of the fire in the burnt plot (which was 9/ 4/75).

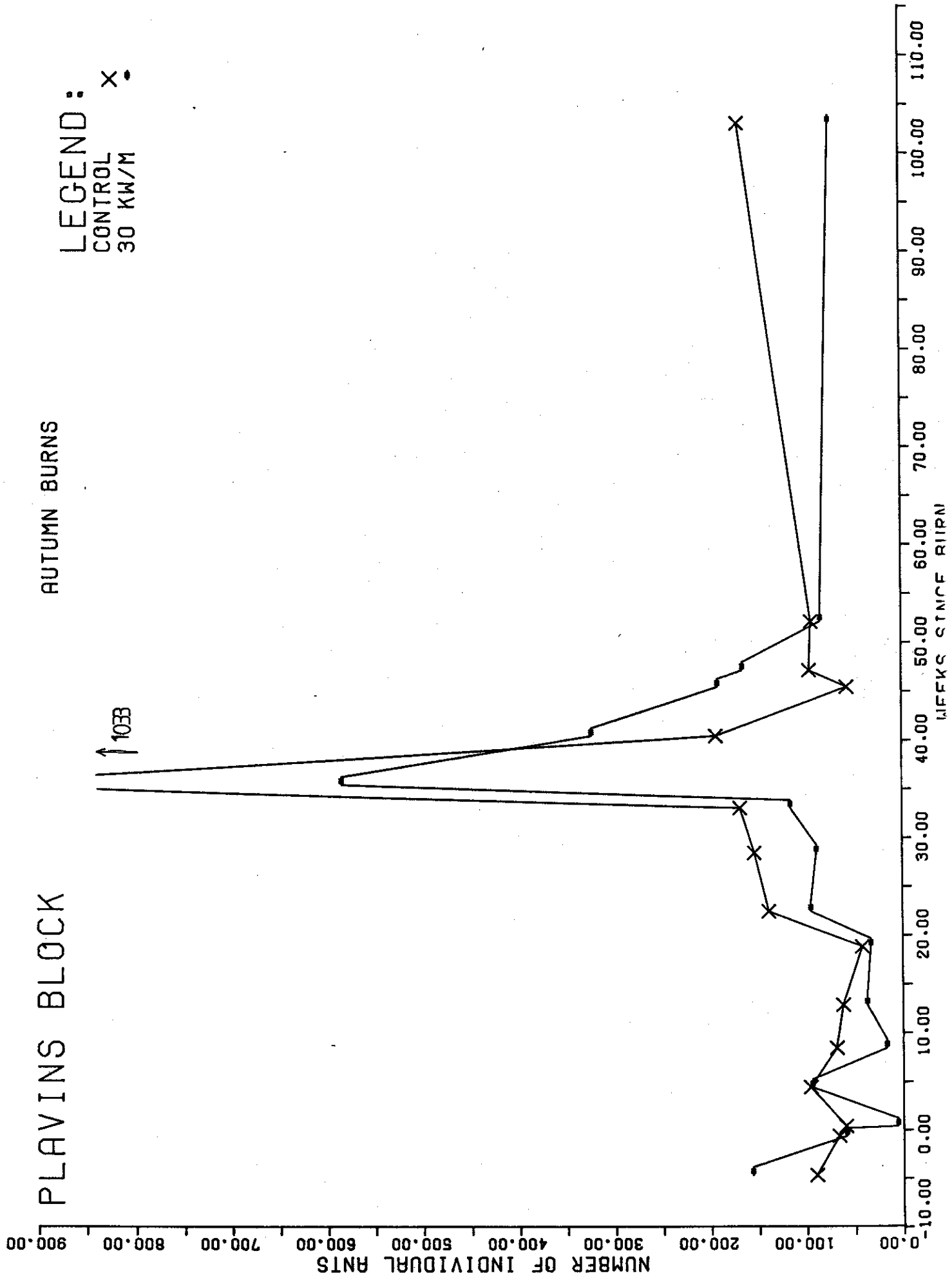


Fig. 3. Variation with time of differences in total number of ants present in playing control and 30 kW/m burn plots. Ants were sampled by using pitfall trap grids run for 7-day periods at approximately monthly intervals. The horizontal axis is scaled in weeks per centimetre with the origin representing the day of the fire in the burnt plot (which was 9 / 4/75).

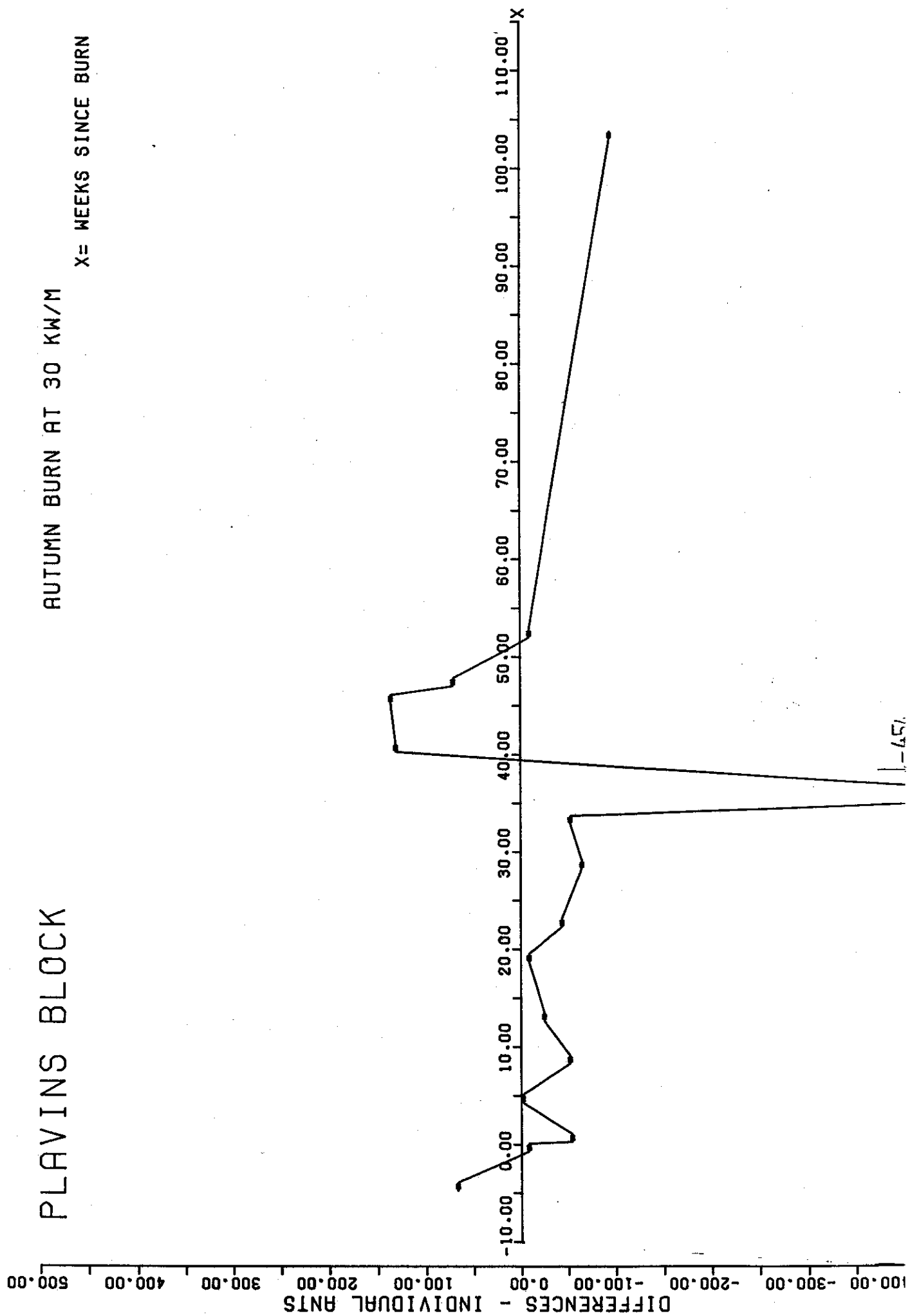


Fig. 4. Total ants of each species obtained from pitfall trap grids run for 7-day periods at approximately monthly intervals in plains control and 175 kW/m burn plots. The horizontal axis is scaled in weeks per centimetre with the origin representing the day of the fire in the burnt plot (which was 9/4/75).

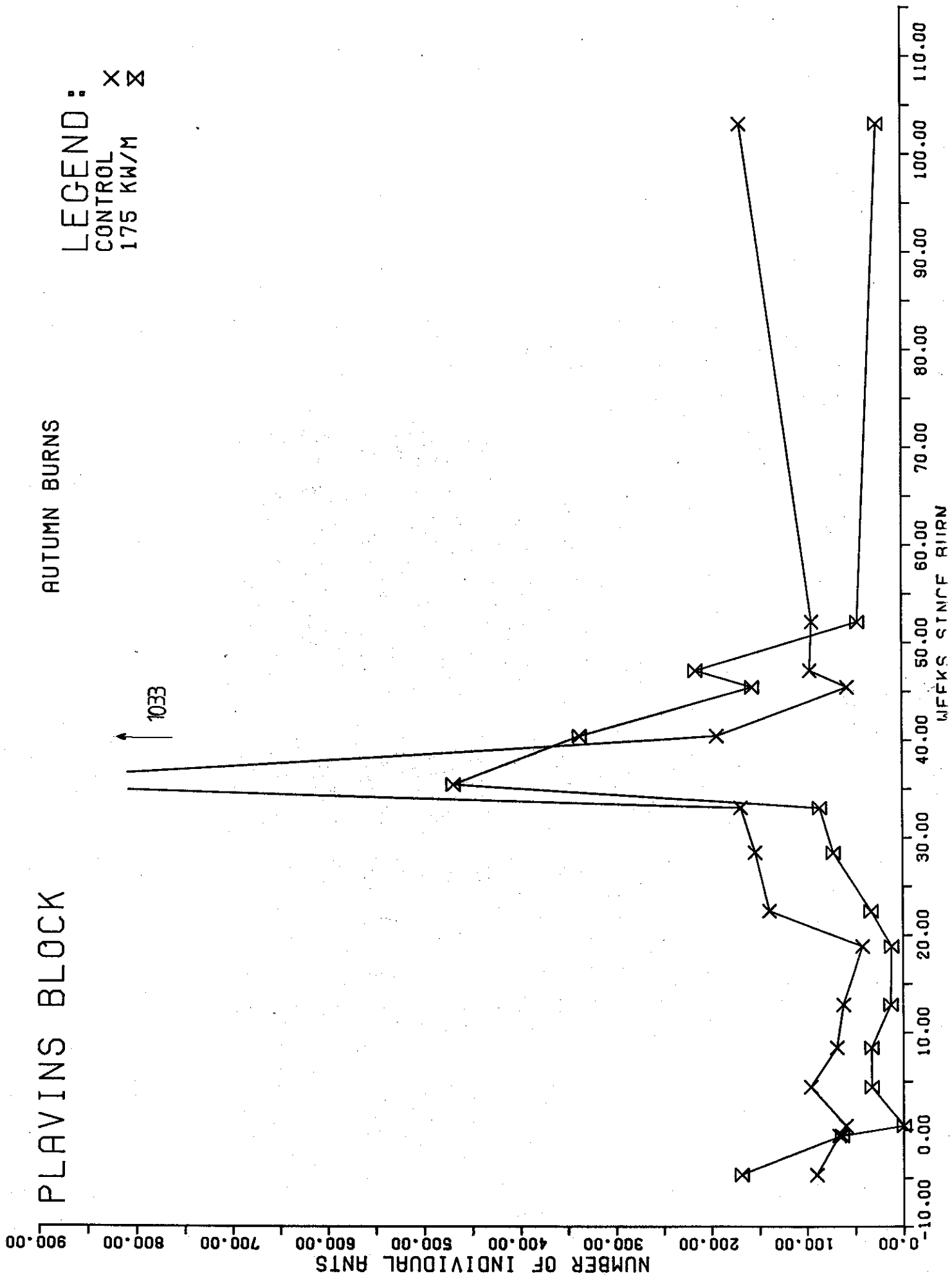


Fig. 5. Variation with time of differences in total number of ants present in plains control and 175 kW/m burn plots. Ants were sampled by using pitfall trap grids run for 7-day periods at approximately monthly intervals. The horizontal axis is scaled in weeks per centimetre with the origin representing the day of the fire in the burnt plot (which was 9/ 4/75).

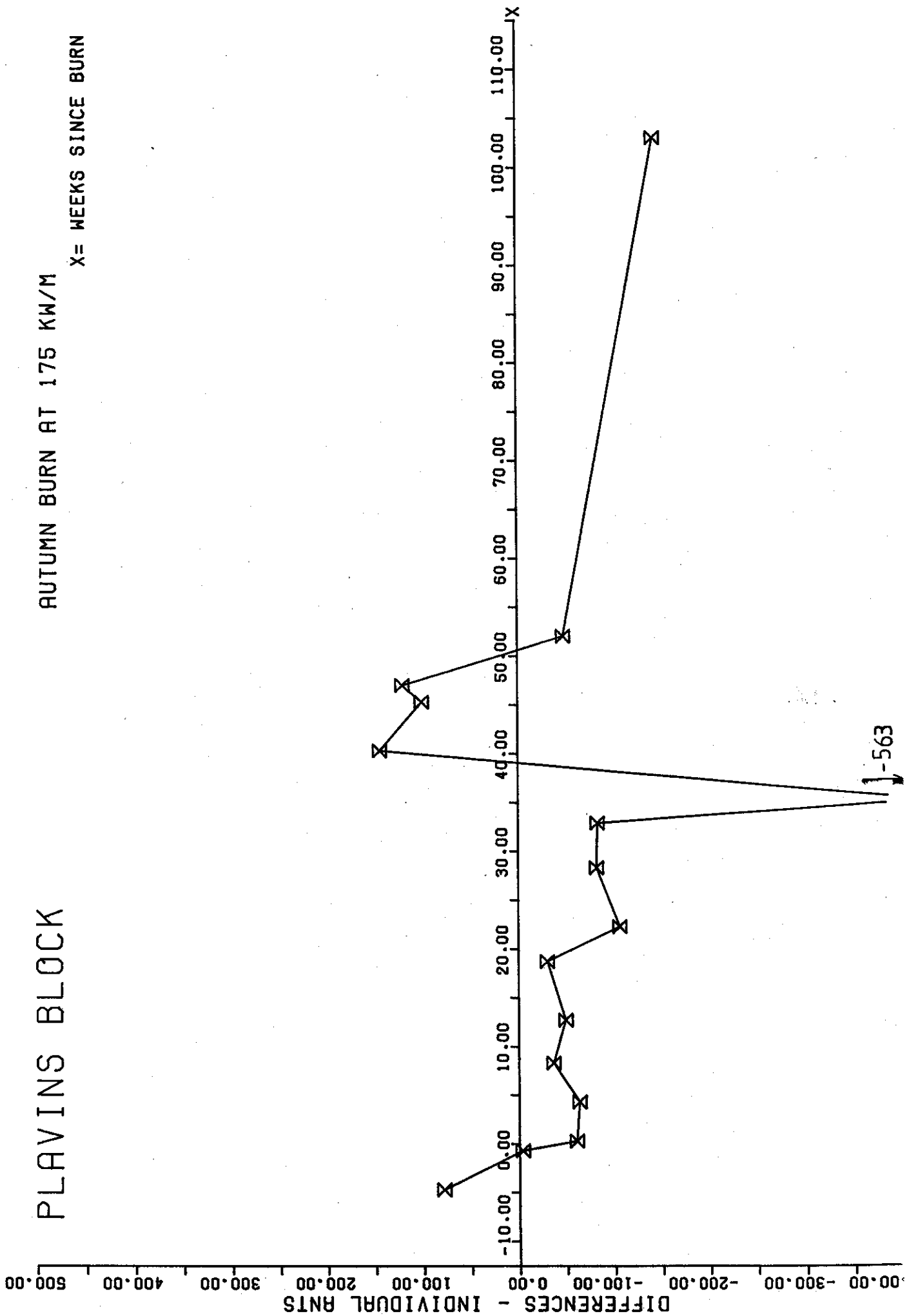


Fig. 6. Total ants of each species obtained from pitfall trap grids run for 7-day periods at approximately monthly intervals in Victoria control and 175 kW/m burn plots. The horizontal axis is scaled in weeks per centimetre with the origin representing the day of the fire in the burnt plot (which was 29/ 3/78).

VICTORIA BLOCK

Autumn Burn

Legend:

CONTROL X
175 KW/M ☒

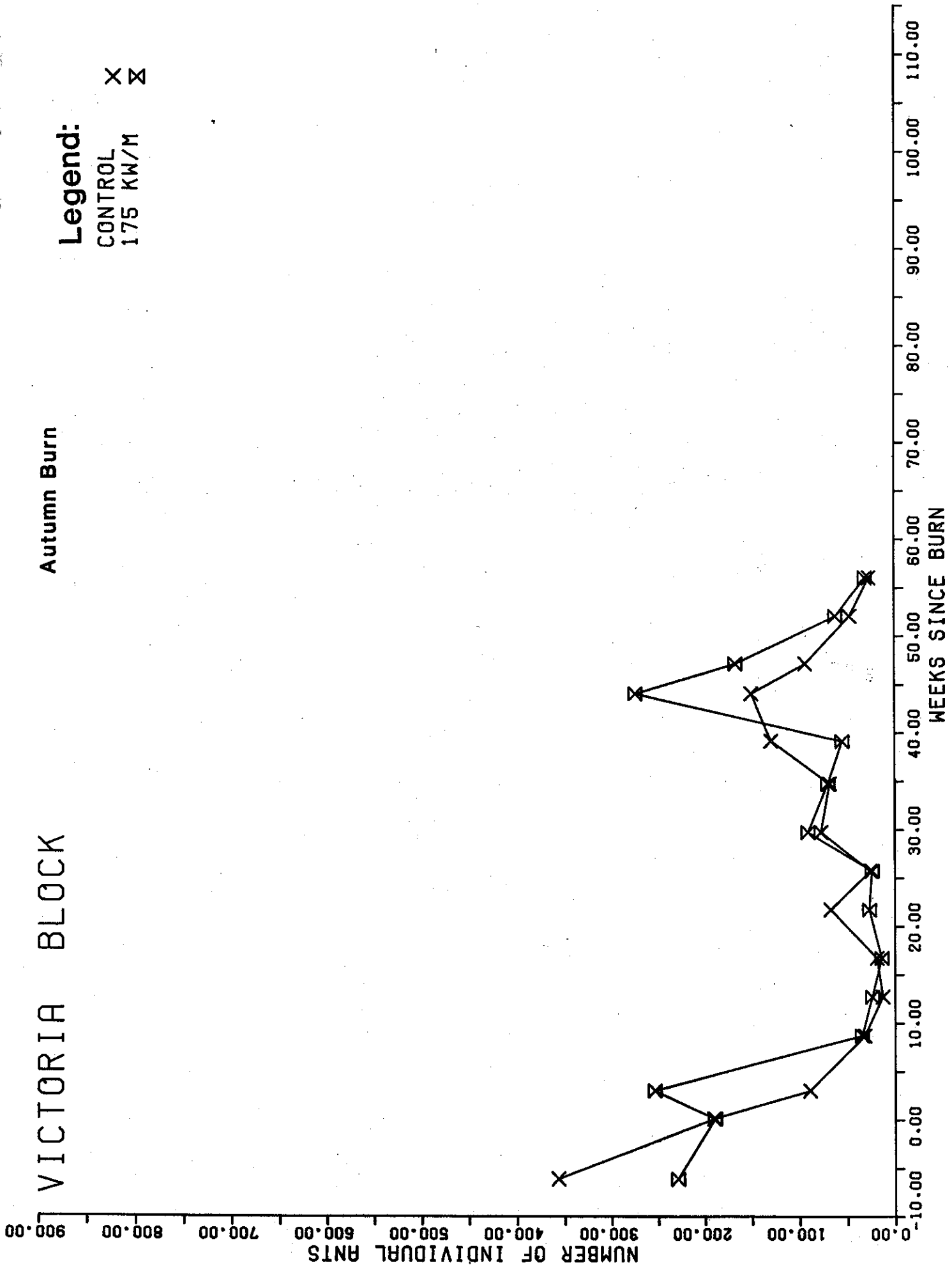


Fig. 7. Variation with time of differences in total number of ants present in Victoria control and 175 kW/m burn plots. Ants were sampled by using pitfall trap grids run for 7-day periods at approximately monthly intervals. The horizontal axis is scaled in weeks per centimetre with the origin representing the day of the fire in the burnt plot (which was 29/3/78).

VICTORIA BLOCK

AUTUMN BURN AT 175 KW/M

X= WEEKS SINCE BURN

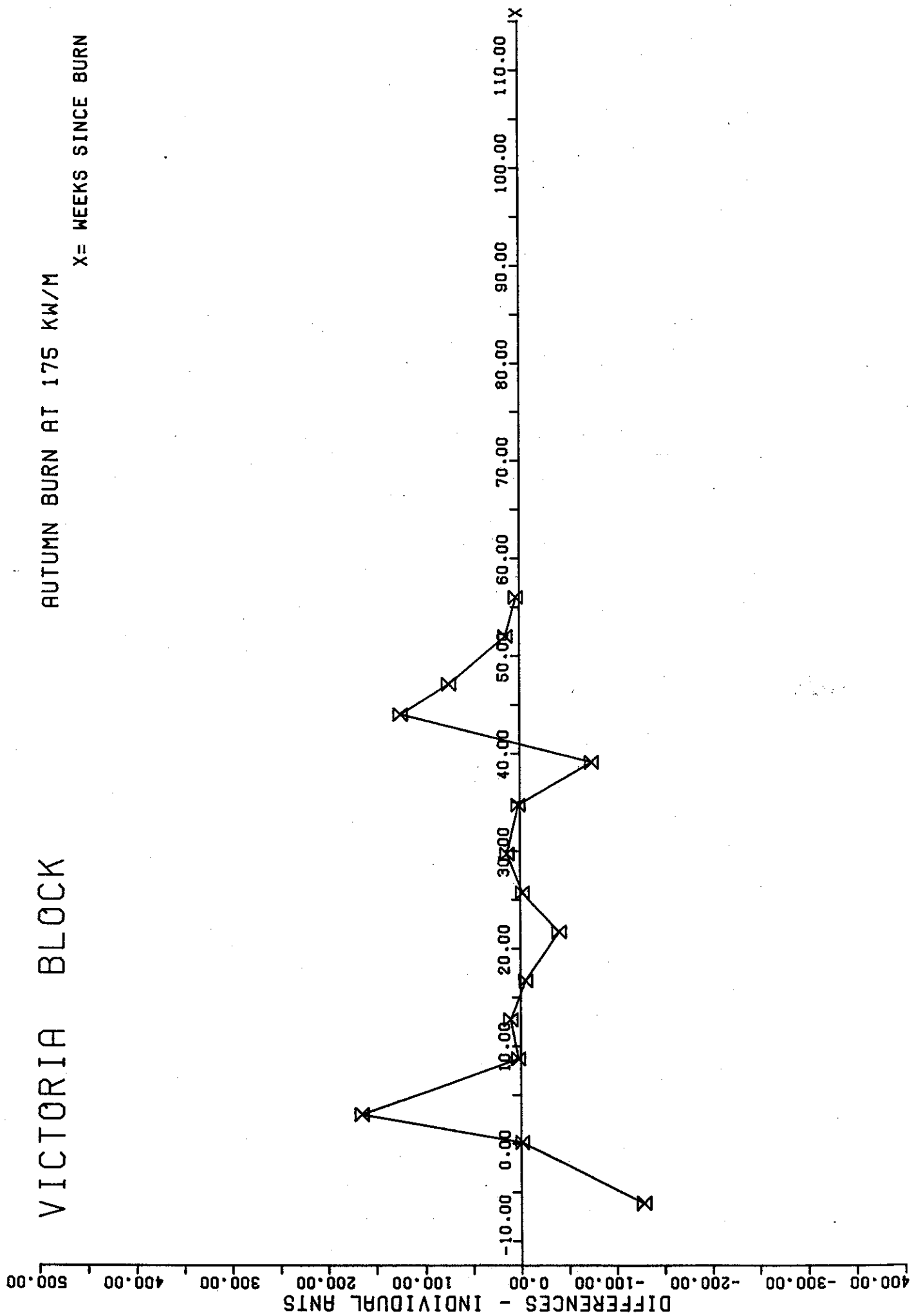


Fig. 8. Total ants of each species obtained from pitfall trap grids run for 7-day periods at approximately monthly intervals in Curaru control and 500 kW/m burn plots. The horizontal axis is scaled in weeks per centimetre with the origin representing the day of the fire in the burnt plot (which was 22/ 3/76).

AUTUMN BURN

CURARU BLOCK

LEGEND:
 CONTROL X
 500 KW/M X

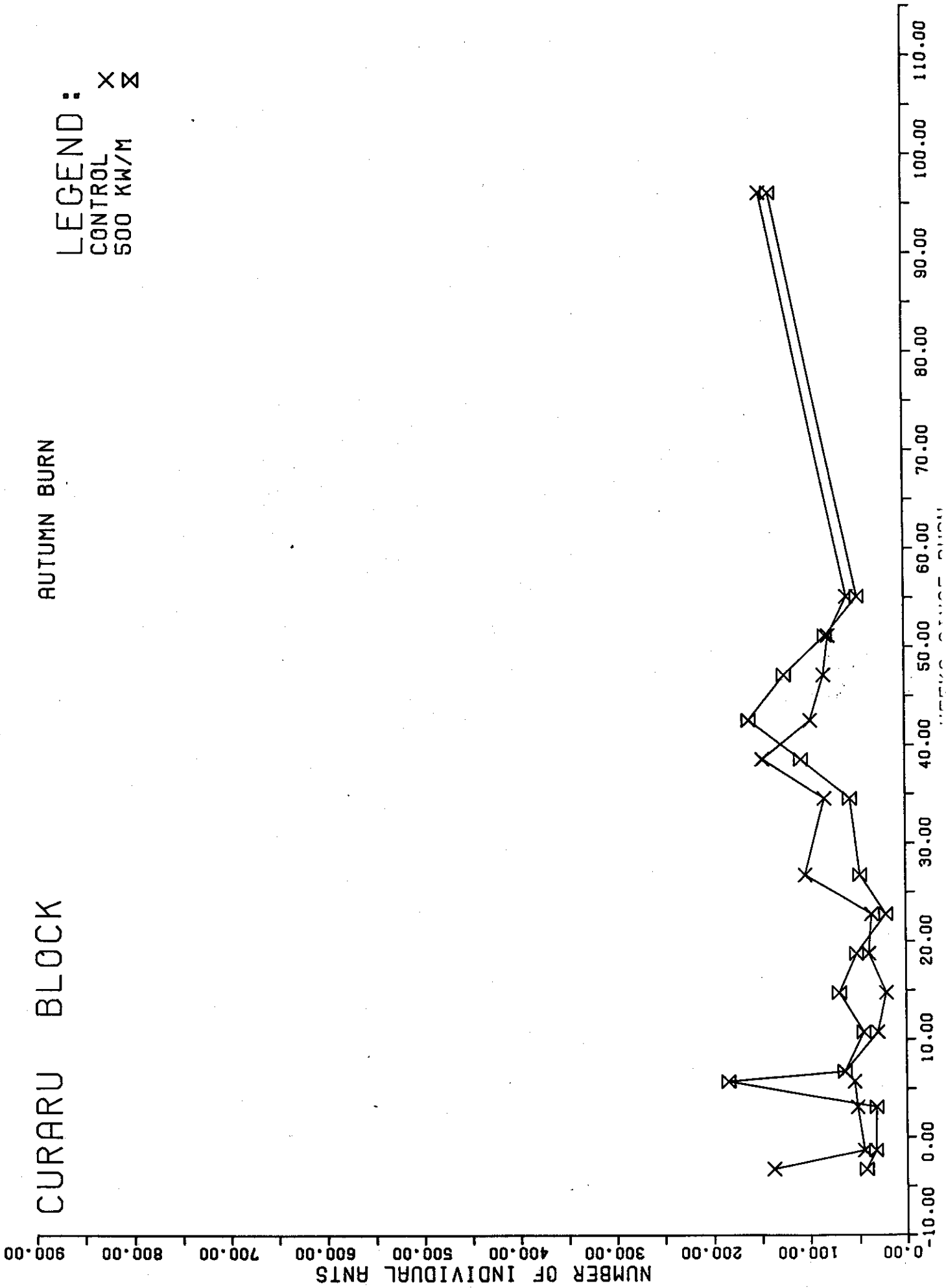


Fig. 9. Variation with time of differences in total number of ants present in Curaru control and 500 kW/m burn plots. Ants were sampled by using pitfall trap grids run for 7-day periods at approximately monthly intervals. The horizontal axis is scaled in weeks per centimetre with the origin representing the day of the fire in the burnt plot (which was 22/3/76).

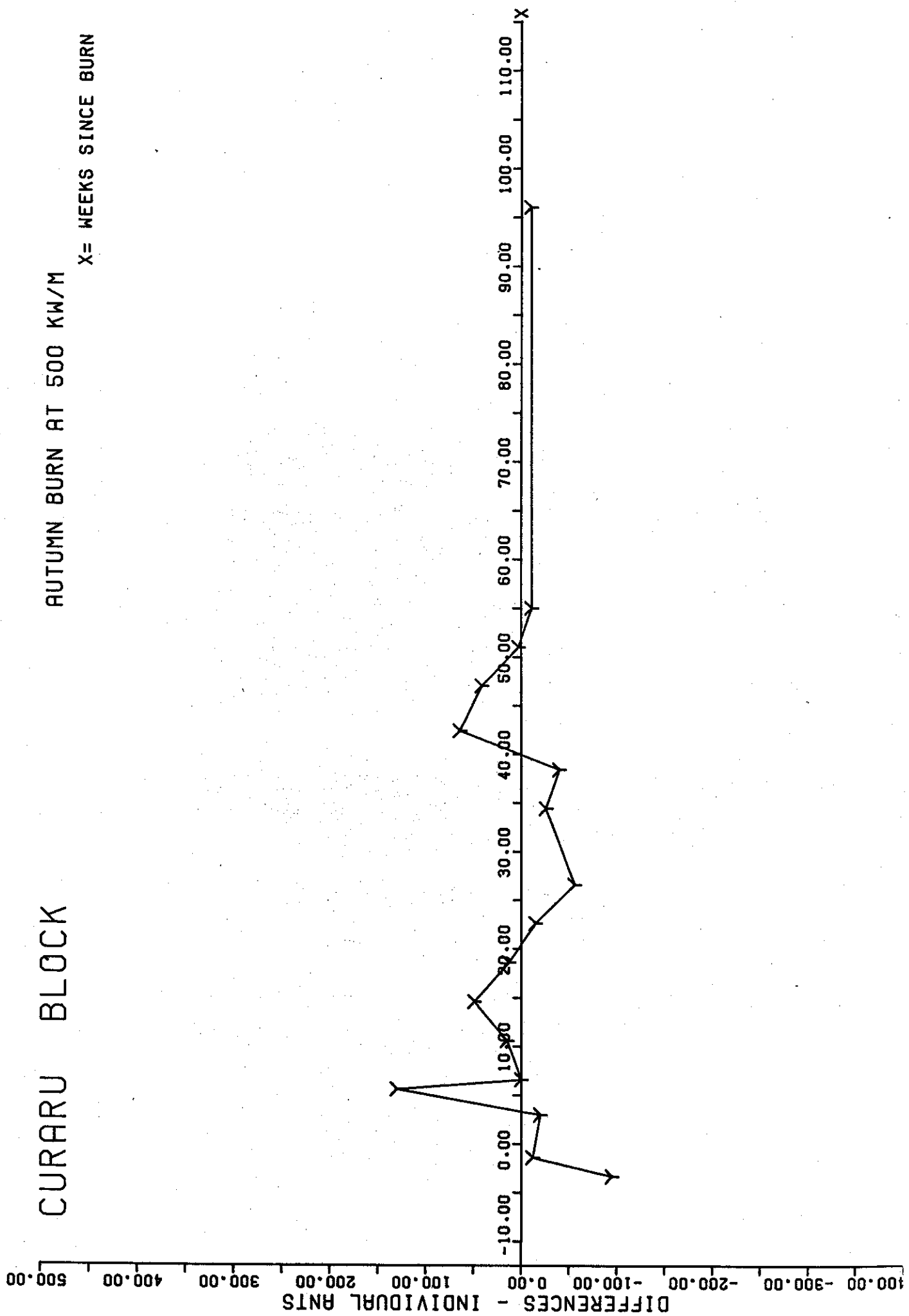


Fig. 10. Total ants of each species obtained from pitfall trap grids run for 7-day periods at approximately monthly intervals in Pindalup control and 1500 kW/m burn plots. The horizontal axis is scaled in weeks per centimetre with the origin representing the day of the fire in the burnt plot (which was 21/11/76).

PINDALUP BLOCK

Spring Burn

Legend:

CONTROL X
1500 KW/M X

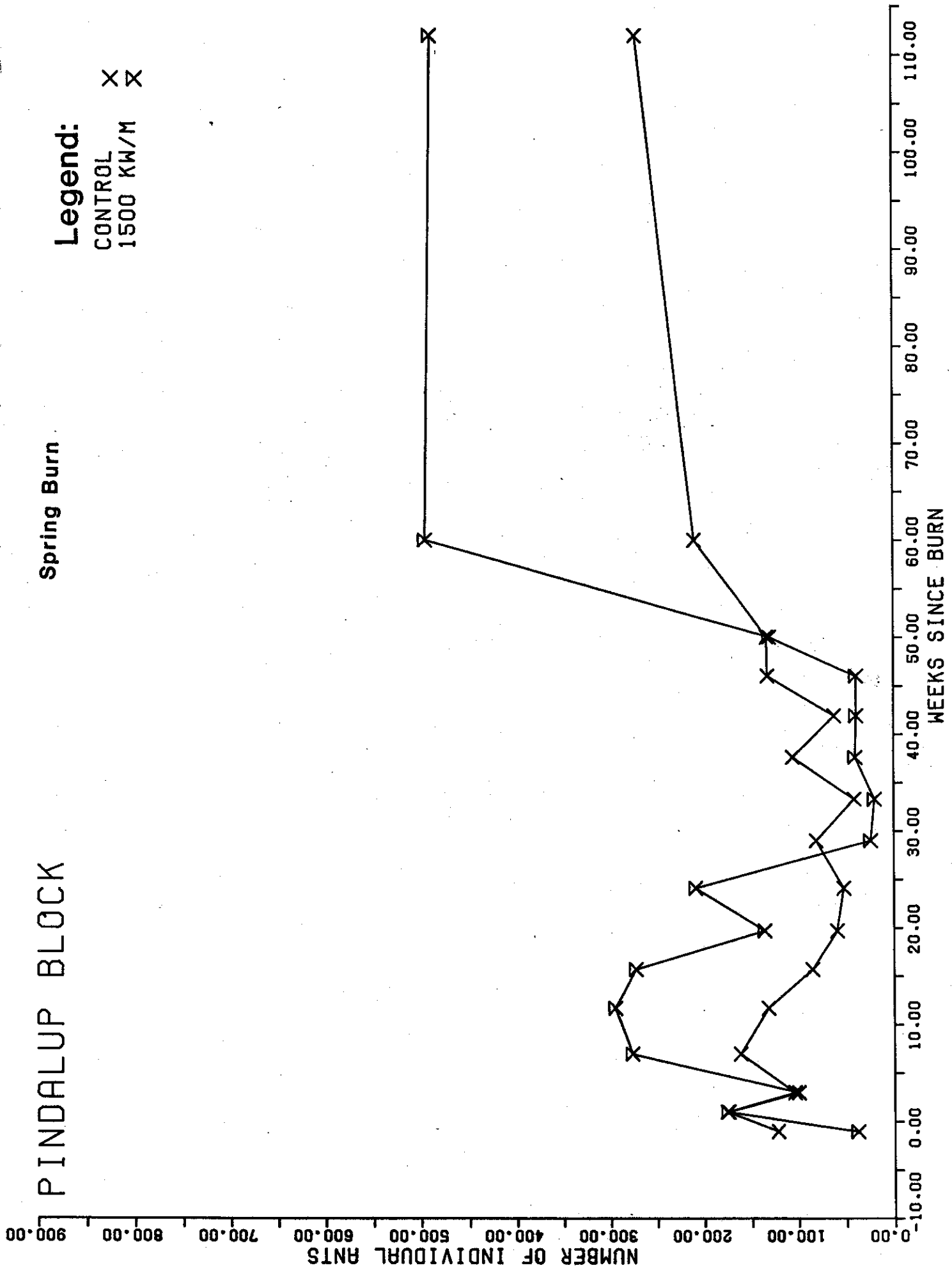


Fig. 11. Variation with time of differences in total number of ants present in Pindalup control and 1500 kW/m burn plots. Ants were sampled by using pitfall trap grids run for 7-day periods at approximately monthly intervals. The horizontal axis is scaled in weeks per centimetre with the origin representing the day of the fire in the burnt plot (which was 21/11/76).

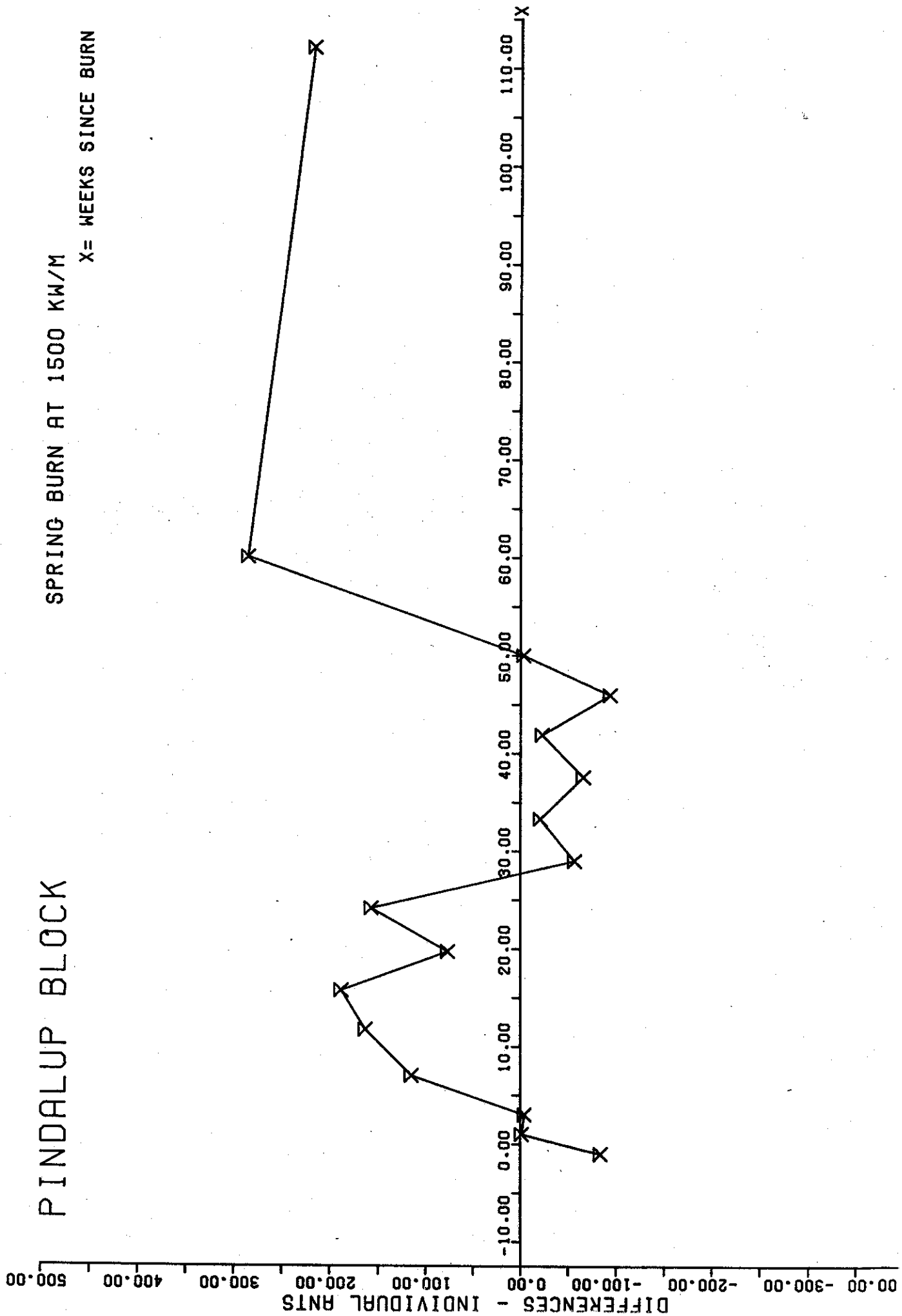
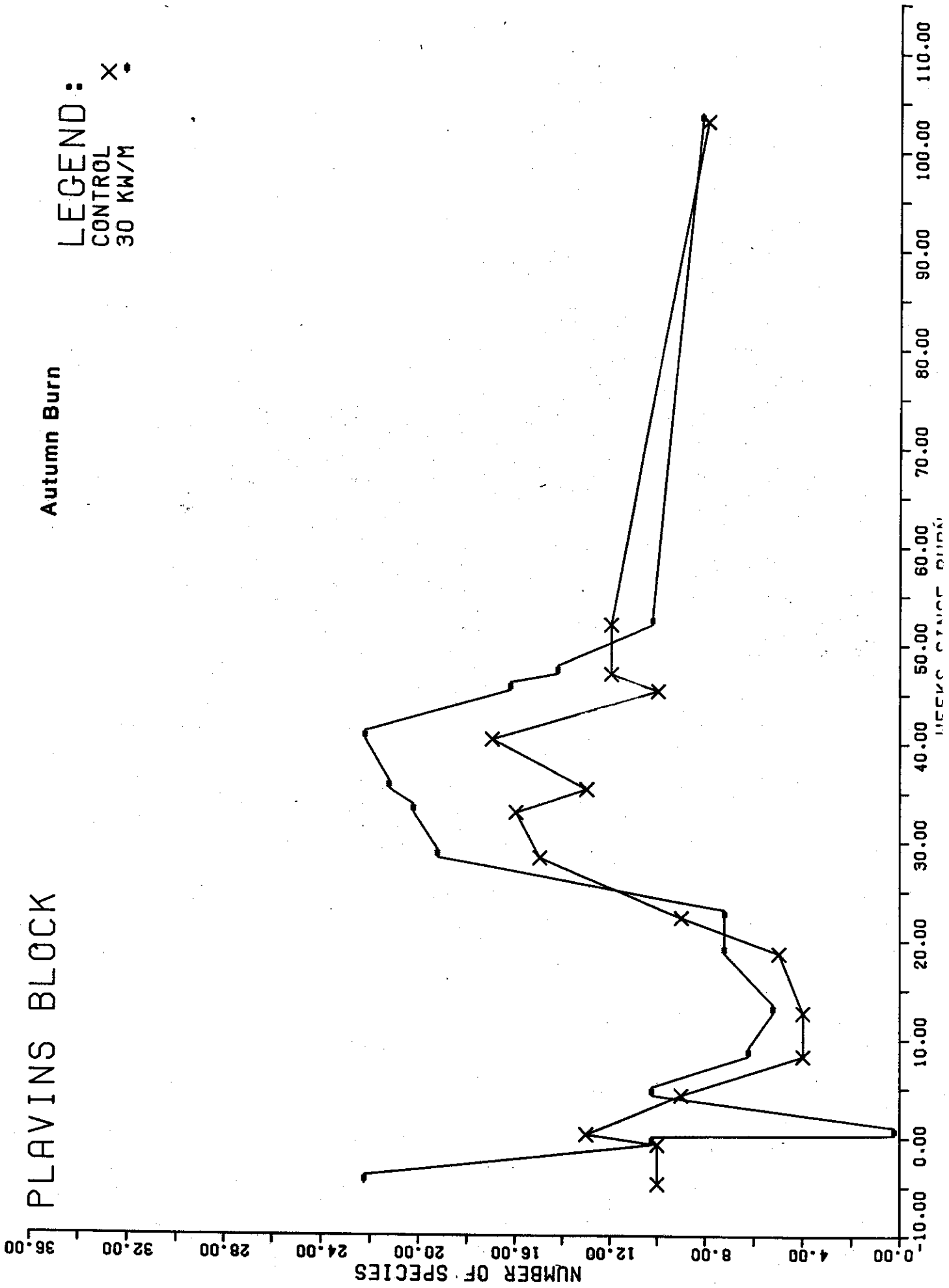


Fig. 12. Variation with time of total number of species present in Playins control and 30 kW/m burn plots. Ants were sampled by using pitfall trap grids run for 7-day periods at approximately monthly intervals. The horizontal axis is scaled in weeks per centimetre with the origin representing the day of the fire in the burnt plot (which was 9/4/75).

PLAYINS BLOCK

Autumn Burn

LEGEND:
CONTROL x
30 KW/M •



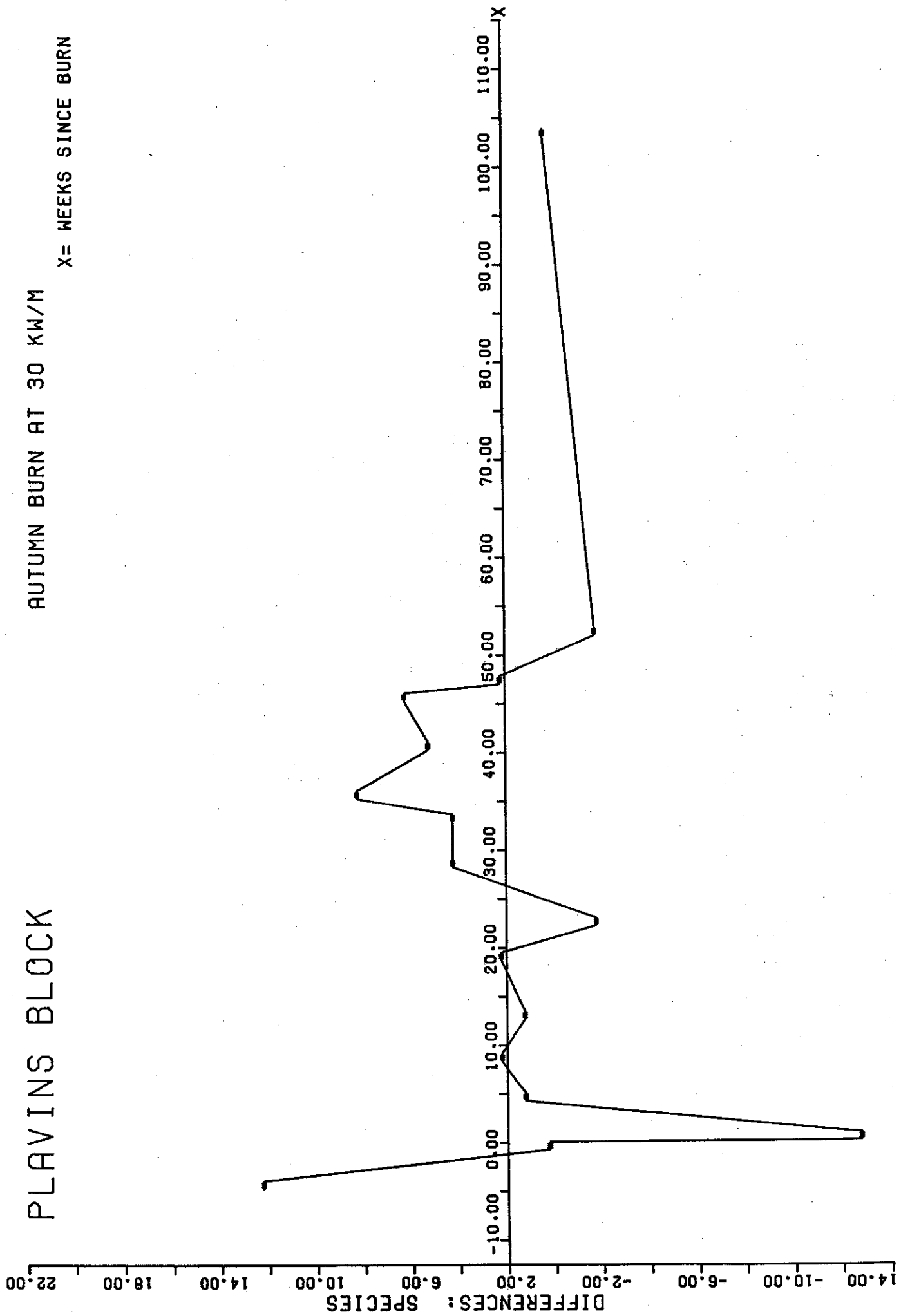


Fig. 13. Variation with time of differences in total number of species caught in pitfall trap grids run for 7-day periods at approximately monthly intervals in Plavins control and 30 kW/m burn plots. The horizontal axis is scaled in weeks per centimetre with the origin representing the day of the fire in the burnt plot (which was 9/ 4/75).

Fig. 14. Variation with time of total number of species present in playing control and 175 kW/m burn plots. Ants were sampled by using pitfall trap grids run for 7-day periods at approximately monthly intervals. The horizontal axis is scaled in weeks per centimetre with the origin representing the day of the fire in the burnt plot (which was 9/ 4/75).

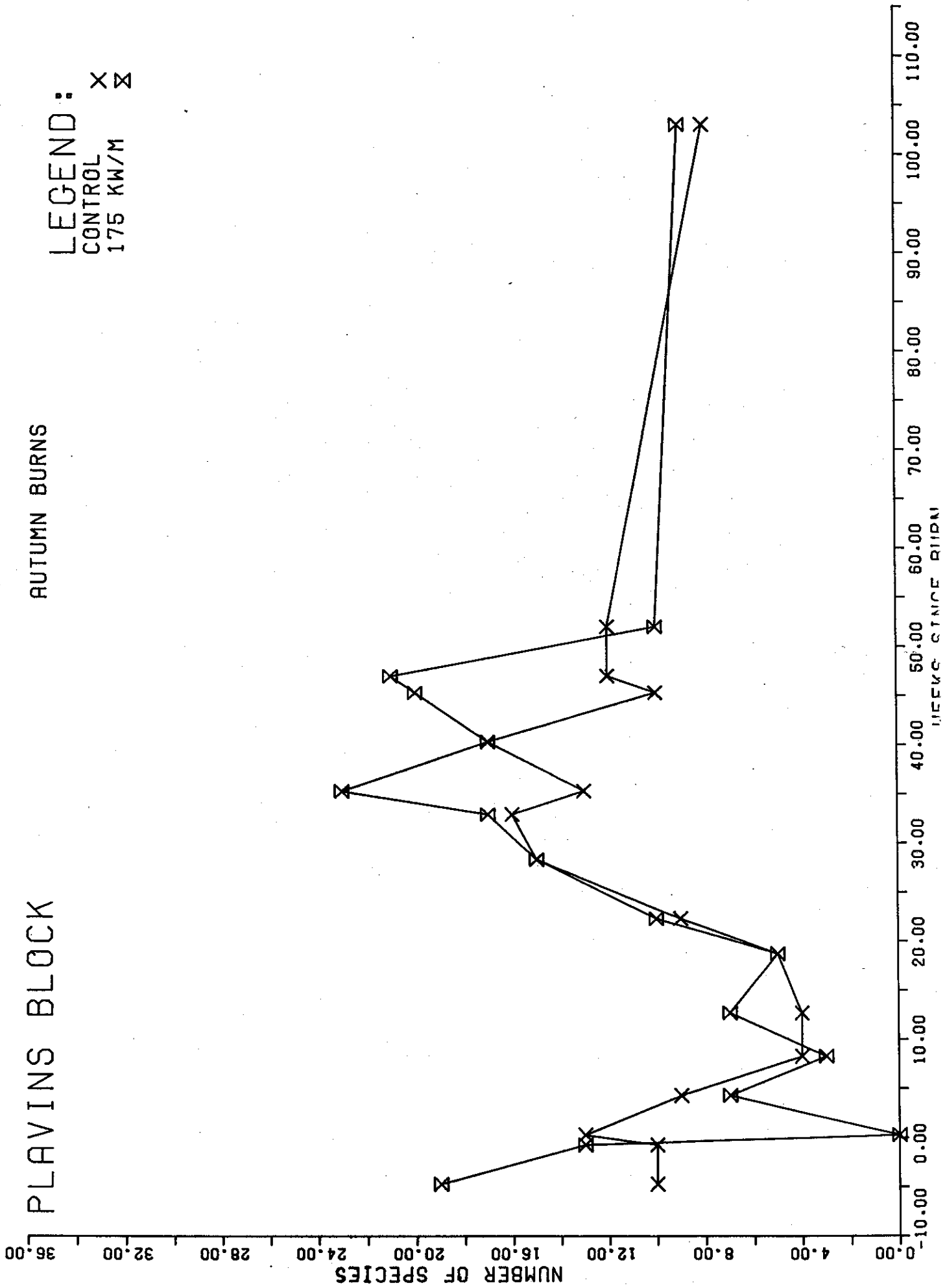


Fig. 15. Variation with time of differences in total number of species caught in pitfall trap grids run for 7-day periods at approximately monthly intervals in Plavins control and 175 kW/m burn plots. The horizontal axis is scaled in weeks per centimetre with the origin representing the day of the fire in the burnt plot (which was 9 / 4/75).

PLAVINS BLOCK

AUTUMN BURN AT 175KW/M

X= WEEKS SINCE BURN

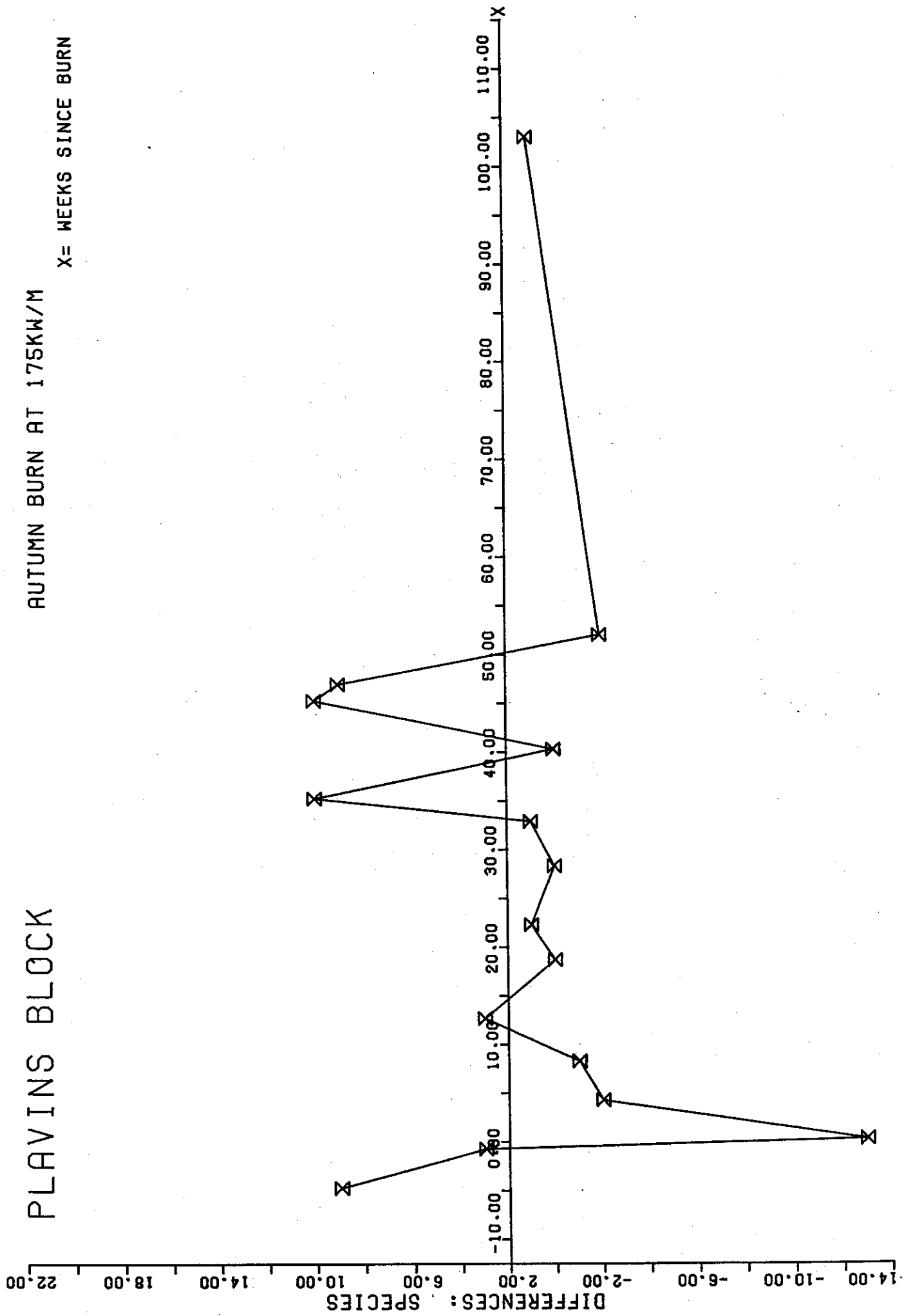


Fig. 16. Variation with time of total number of species present in Victoria control and 175 kW/m burn plots. Ants were sampled by using pitfall trap grids run for 7-day periods at approximately monthly intervals. The horizontal axis is scaled in weeks per centimetre with the origin representing the day of the fire in the burnt plot (which was 29/ 3/78).

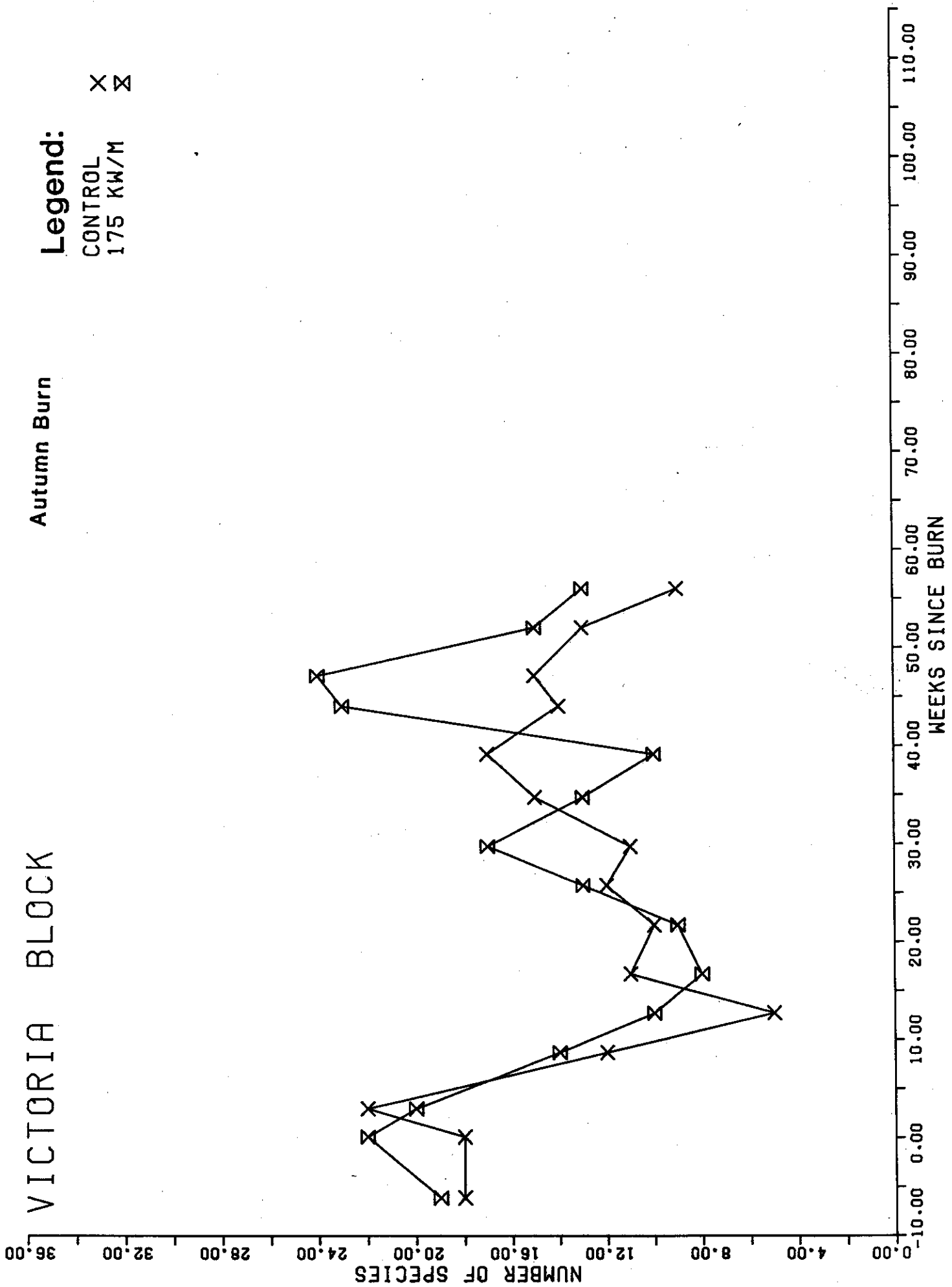


Fig. 17. Variation with time of differences in total number of species caught in pitfall trap grids run for 7-day periods at approximately monthly intervals in Victoria control and 175 kW/m burn plots. The horizontal axis is scaled in weeks per centimetre with the origin representing the day of the fire in the burnt plot (which was 29/3/78).

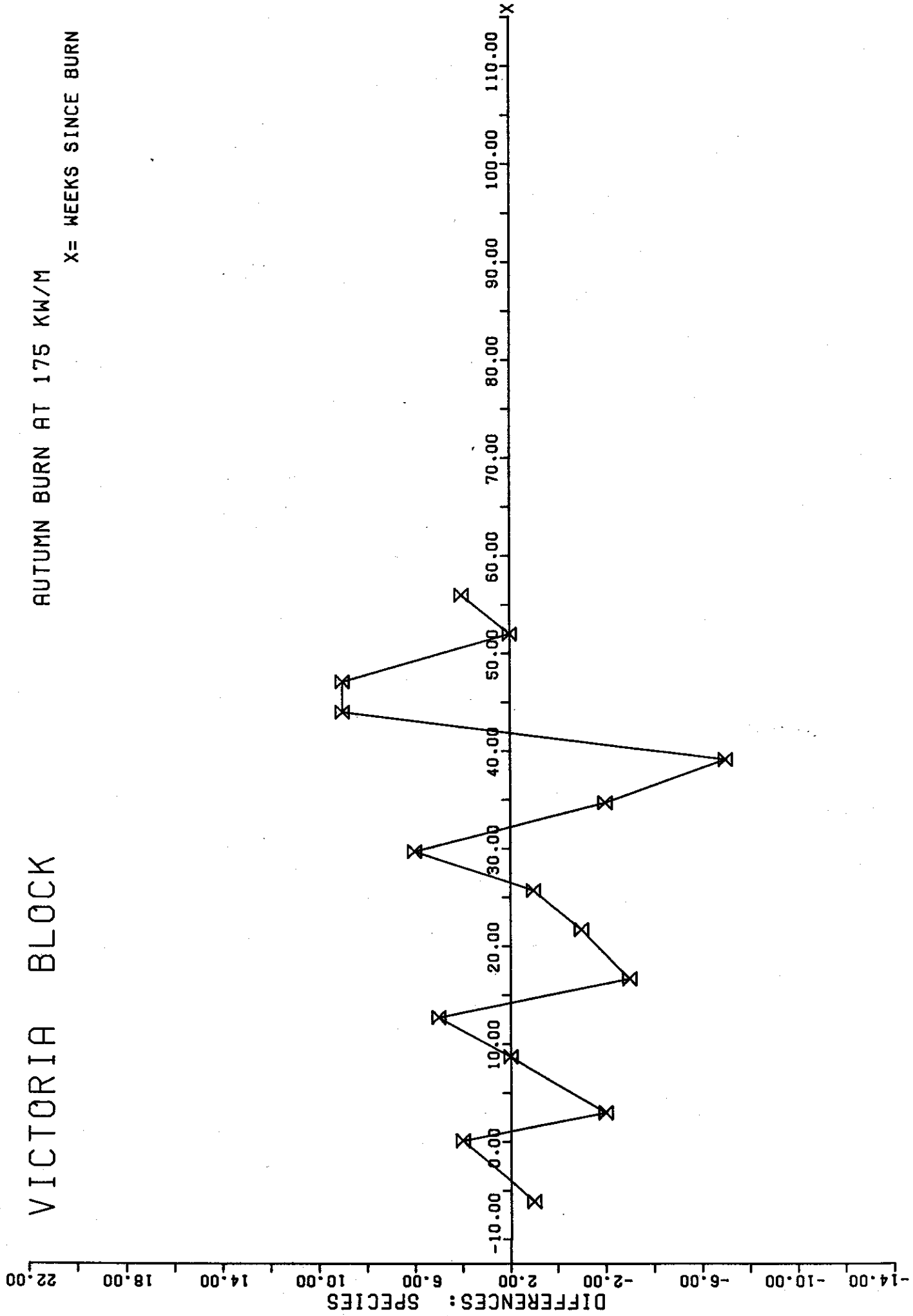


Fig. 18. Variation with time of total number of species present in Curaru control and 500 kW/m burn plots. Ants were sampled by using pitfall trap grids run for 7-day periods at approximately monthly intervals. The horizontal axis is scaled in weeks per centimetre with the origin representing the day of the fire in the burnt plot (which was 22/ 3/76).

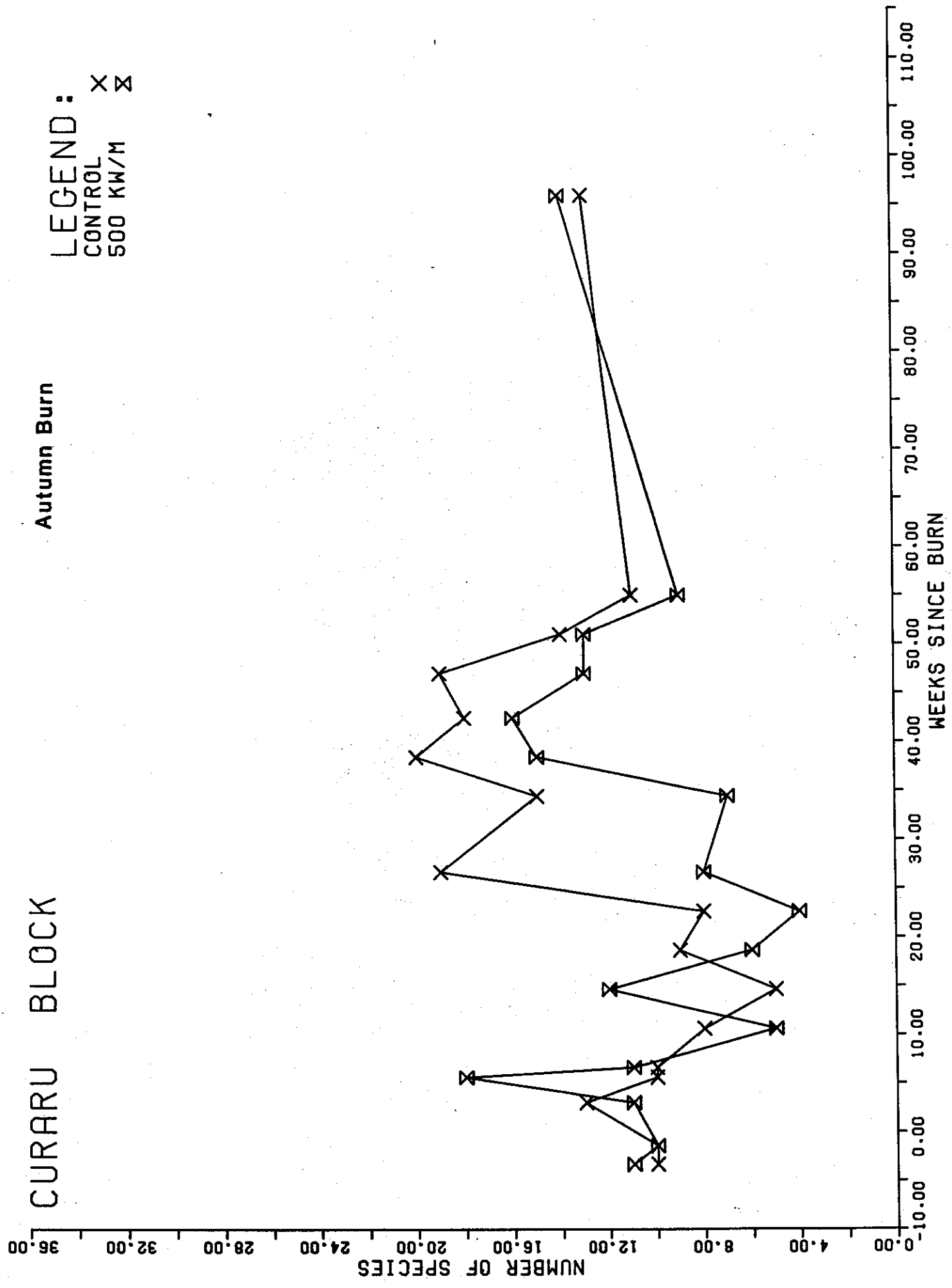


Fig. 19. Variation with time of differences in total number of species caught in pitfall trap grids run for 7-day periods at approximately monthly intervals in Curaru control and 500 kW/m burn plots. The horizontal axis is scaled in weeks per centimetre with the origin representing the day of the fire in the burnt plot (which was 22/3/76).

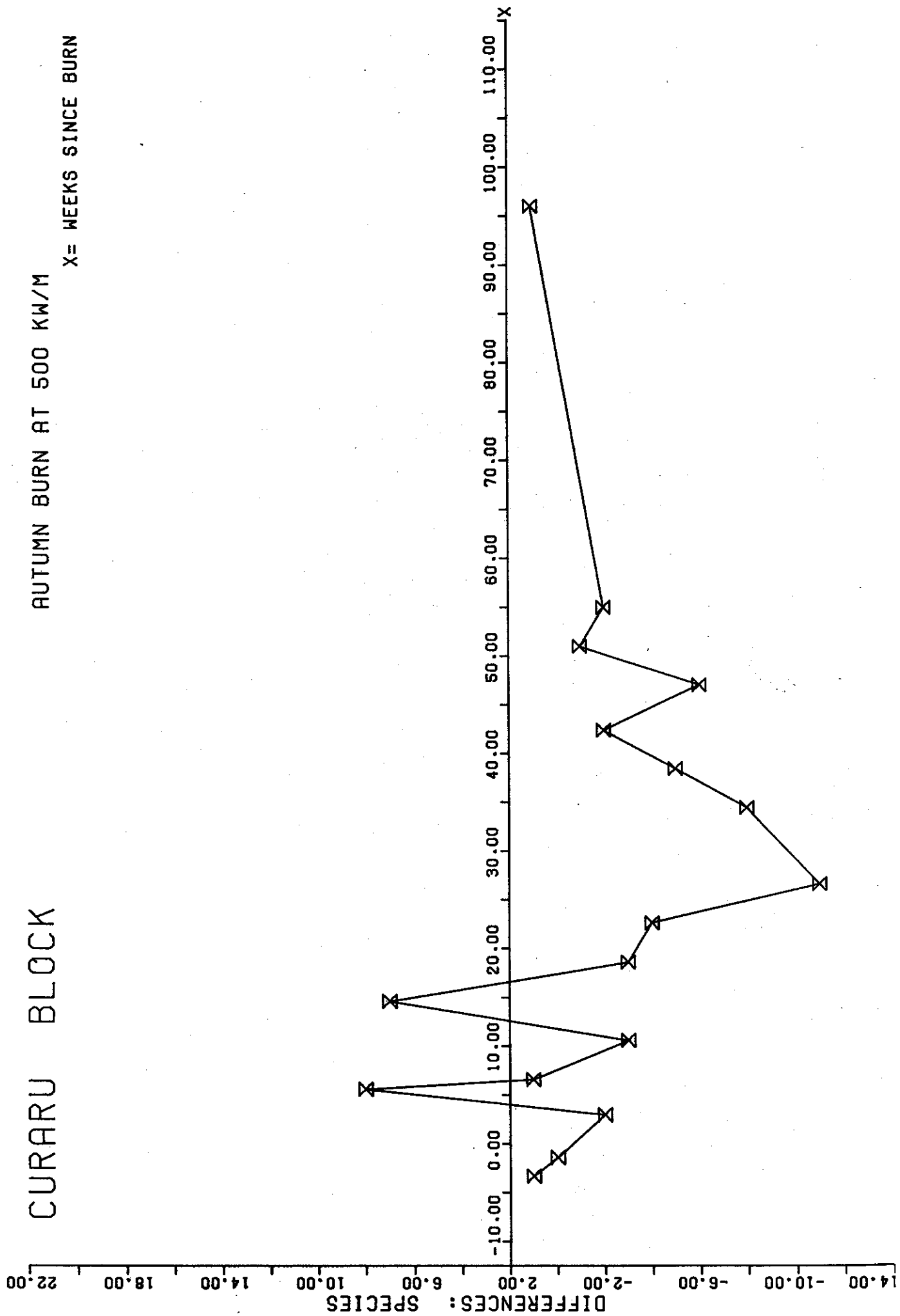


Fig. 20. Variation with time of total number of species present in Pindalup control and 1500 kW/m burn plots. Ants were sampled by using pitfall trap grids run for 7-day periods at approximately monthly intervals. The horizontal axis is scaled in weeks per centimetre with the origin representing the day of the fire in the burnt plot (which was 21/11/76).

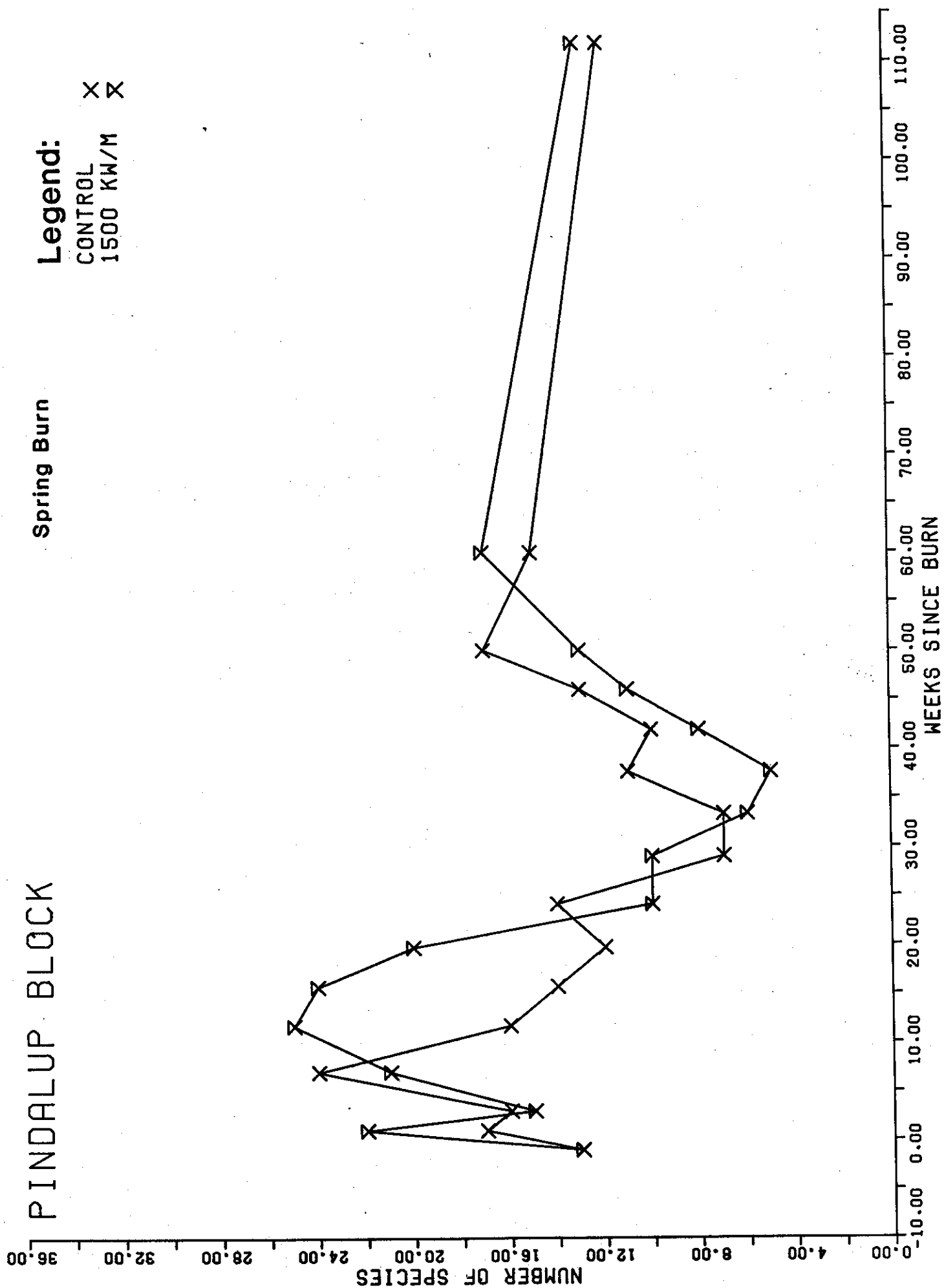


Fig. 21. Variation with time of differences in total
number of species caught in pitfall trap
grids run for 7-day periods at approximately monthly
intervals in Pindalup control and 1500 kW/m burn plots.
The horizontal axis is scaled in weeks per centimetre
with the origin representing the day of the fire in
the burnt plot (which was 21/11/76).

DIFFERENCES: SPECIES

PINDALUP BLOCK

SPRING BURN AT 1500 KW/M

X= WEEKS SINCE BURN

-66a-

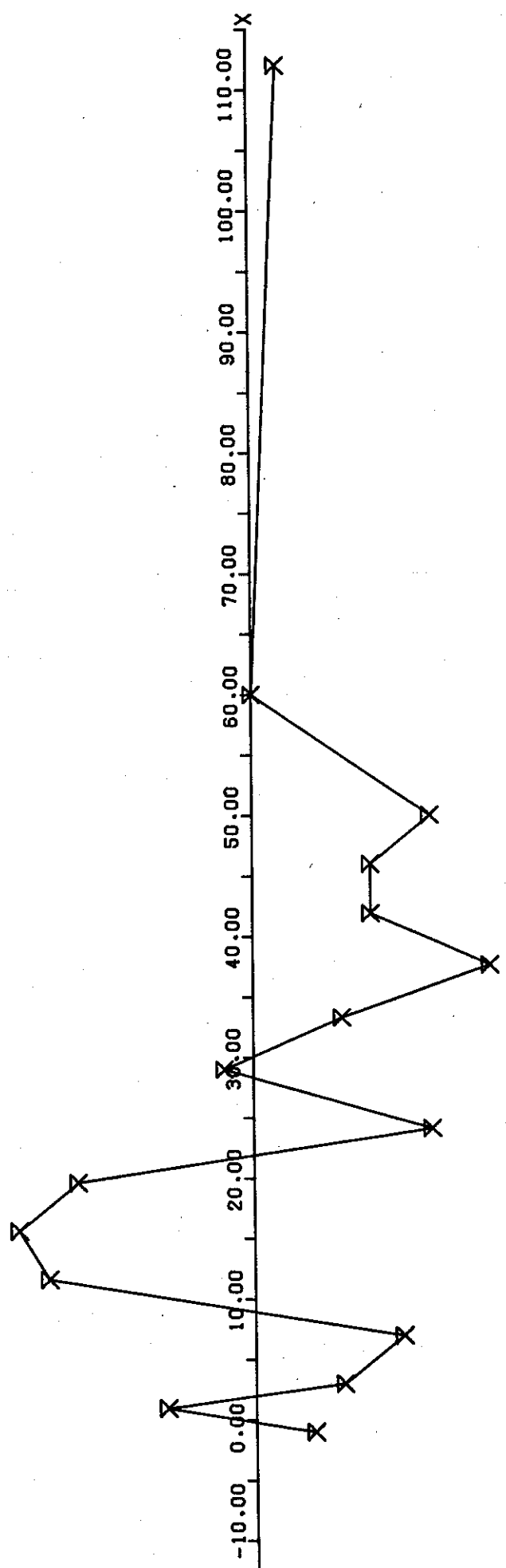


Fig. 22. Variation of evenness with time in
plains control and 30 kW/m burn plots.
Ants were sampled by using pitfall trap grids run
for 7-day periods at approximately monthly intervals.
The horizontal axis is scaled in weeks per centimetre
with the origin representing the day of the fire
in the burnt plot (which was 9/4/75).

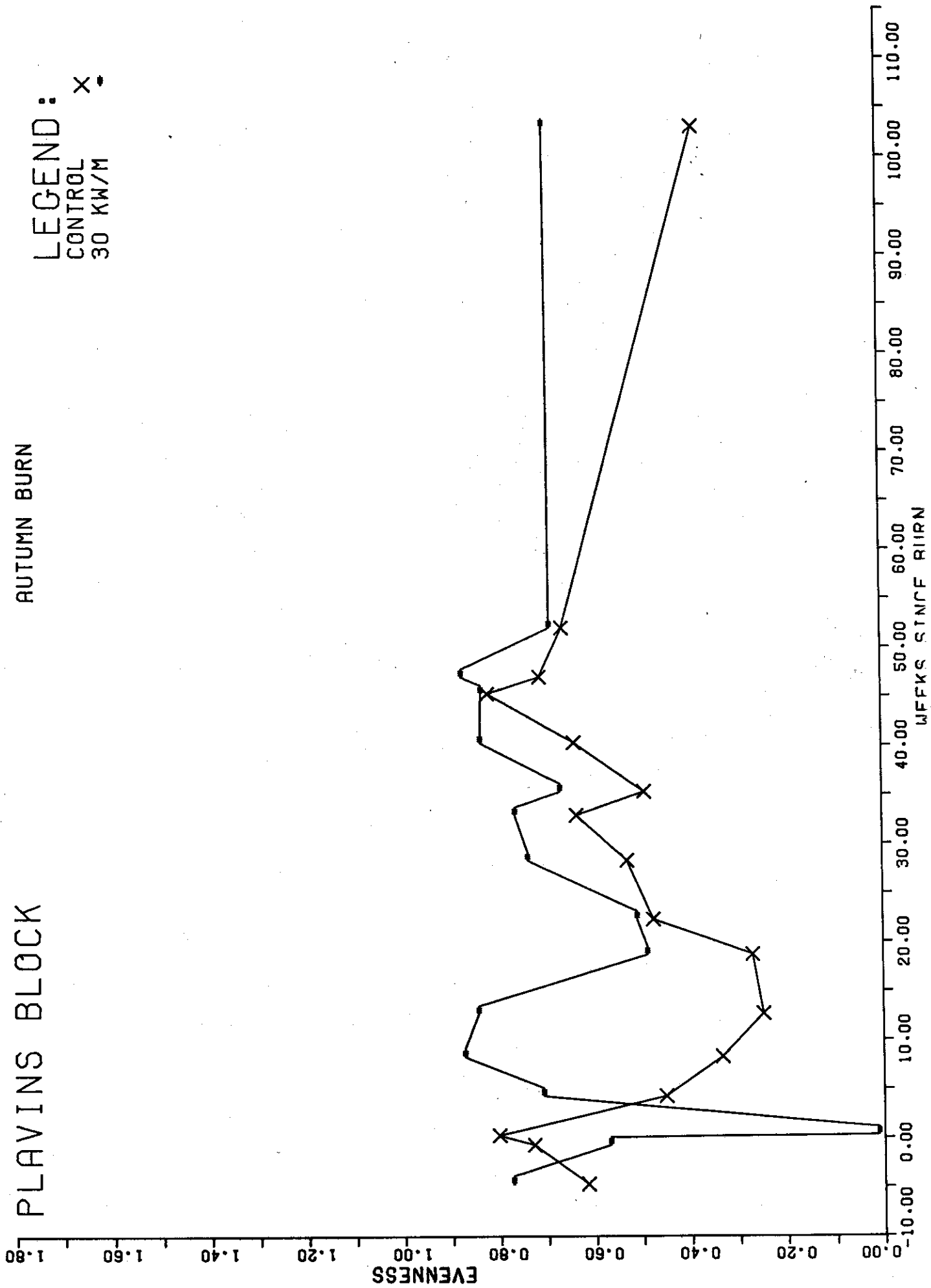


Fig. 23. Variation with time of differences in evenness for ants caught in pitfall trap for grids run 7-day periods at approximately monthly intervals in Plavins control and 30 kW/m burn plots. The horizontal axis is scaled in weeks per centimetre with the origin representing the day of the fire in the burnt plot (which was 9/ 4/75). Also shown is month of year.

PLAYINS BLOCK

AUTUMN BURN AT 30 KW/M

X= WEEKS SINCE BURN

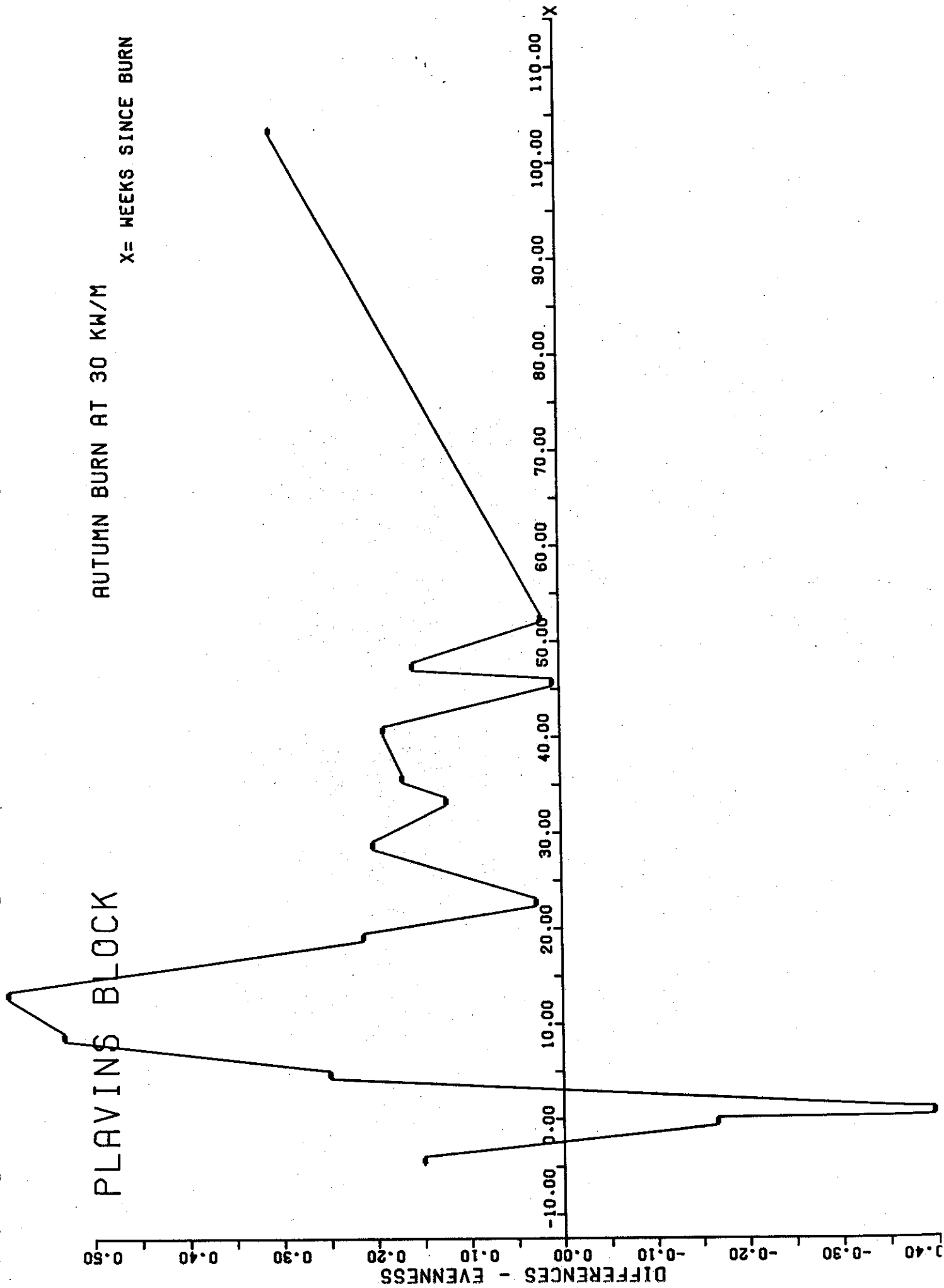


Fig. 24. Variation of evenness with time in
Plains control and 175 kW/m burn plots.
Ants were sampled by using pitfall trap grids run
for 7-day periods at approximately monthly intervals.
The horizontal axis is scaled in weeks per centimetre
with the origin representing the day of the fire
in the burnt plot (which was 9 / 4/75).

AUTUMN BURN

PLAVINS BLOCK

LEGEND:
CONTROL X
175 KW/M X

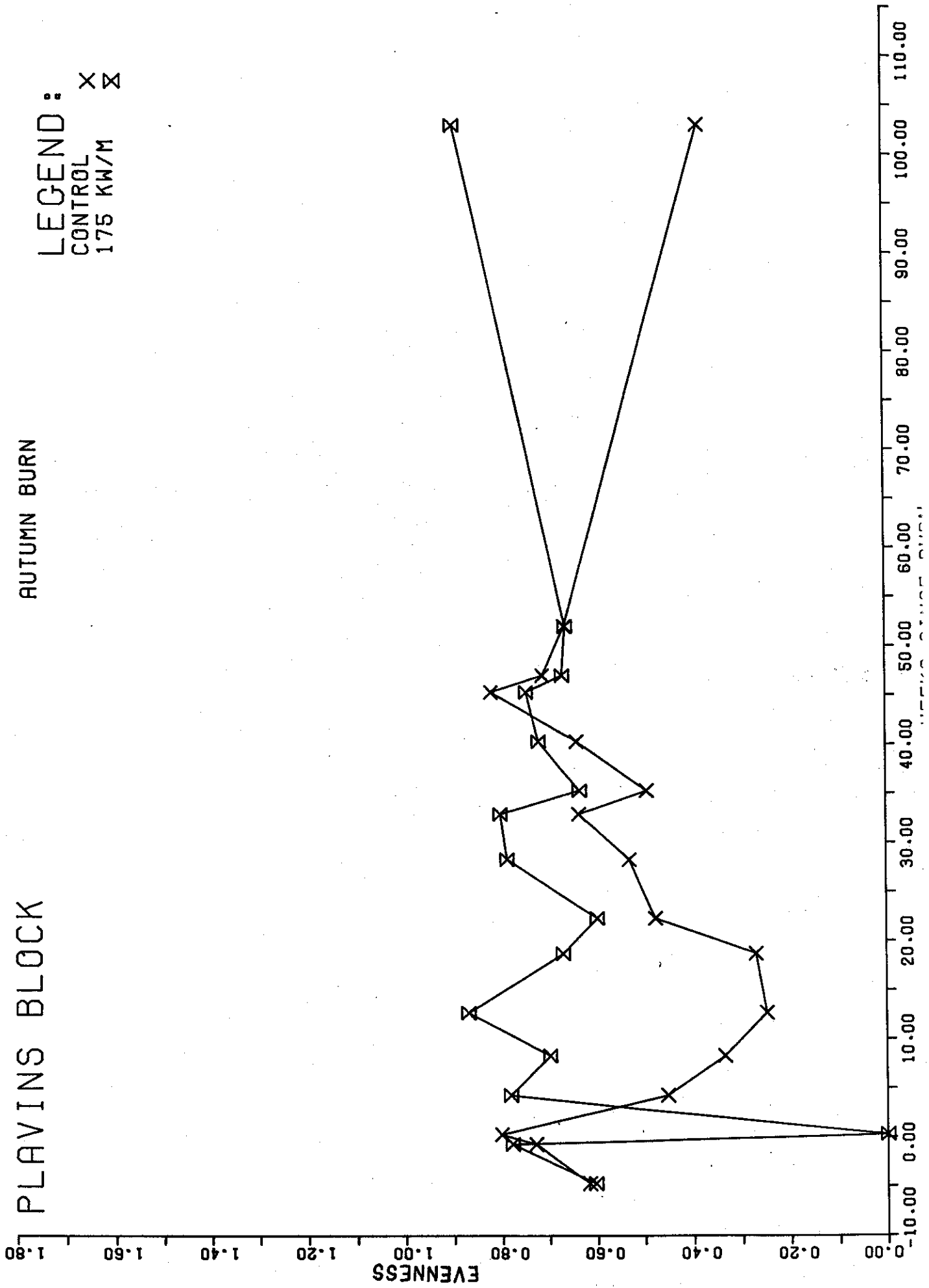


Fig. 25. Variation with time of differences in evenness for ants caught in pitfall trap grids run for 7-day periods at approximately monthly intervals in Plavins control and 175 kW/m burn plots. The horizontal axis is scaled in weeks per centimetre with the origin representing the day of the fire in the burnt plot (which was 9/ 4/75). Also shown is month of year.

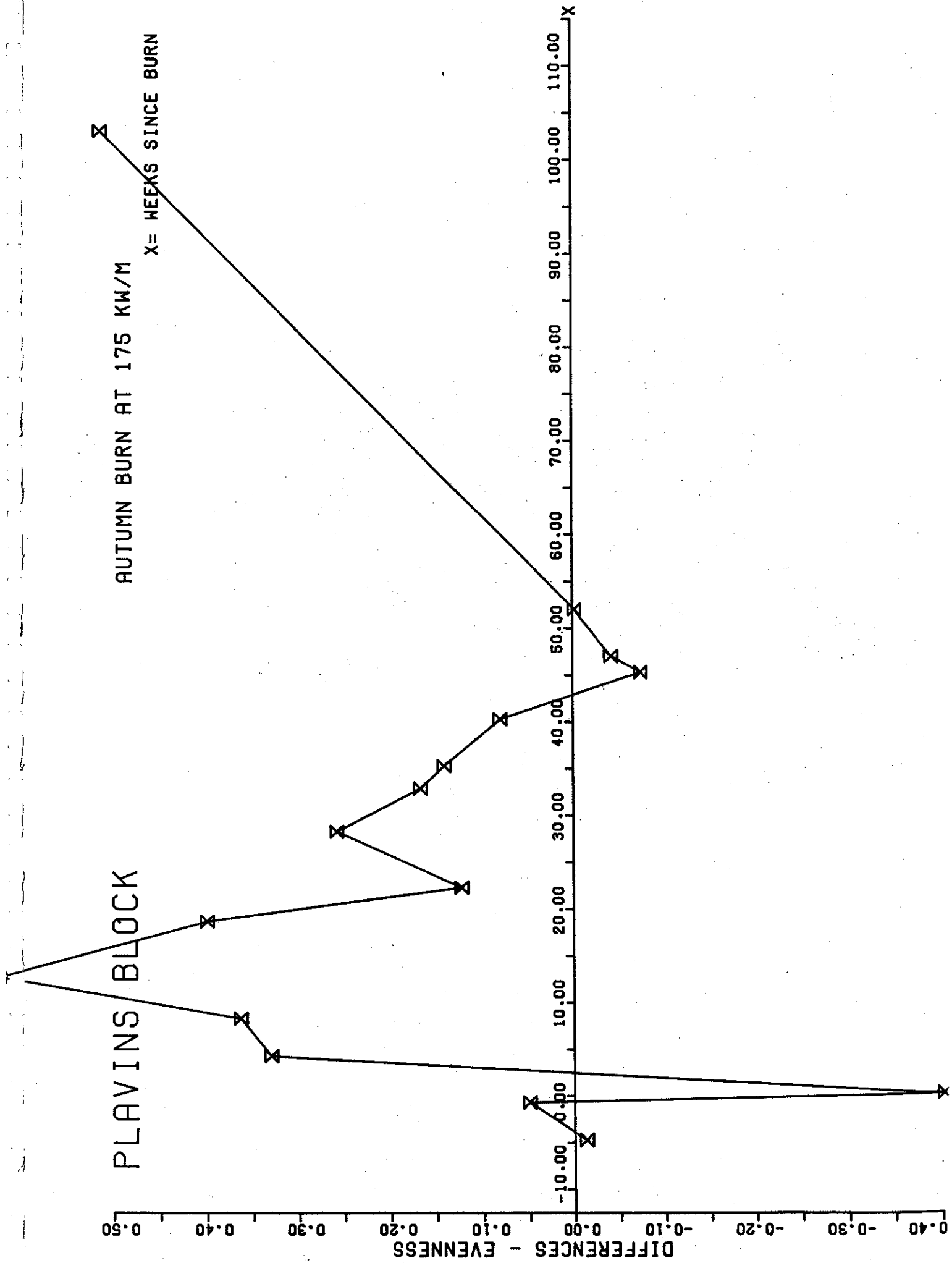


Fig. 26. Variation of evenness with time in
Victoria control and 175 kW/m burn plots.
Ants were sampled by using pitfall trap grids run
for 7-day periods at approximately monthly intervals.
The horizontal axis is scaled in weeks per centimetre
with the origin representing the day of the fire
in the burnt plot (which was 29/3/78).

VICTORIA BLOCK

Autumn Burn

Legend:

CONTROL X
175 KW/M X

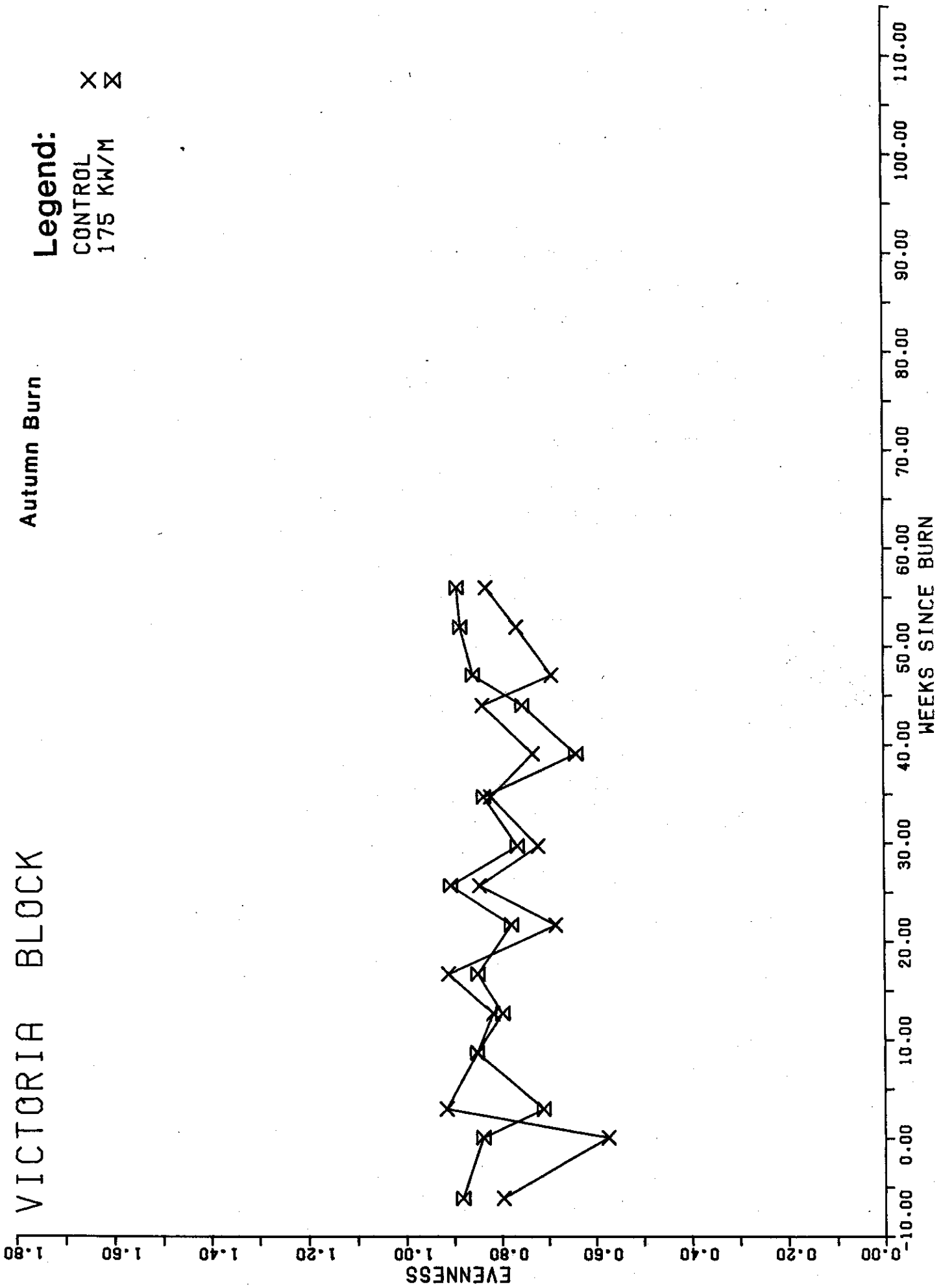


Fig. 27. Variation with time of differences in evenness for ants caught in pitfall trap grids run for 7-day periods at approximately monthly intervals in Victoria control and 175 kW/m burn plots. The horizontal axis is scaled in weeks per centimetre with the origin representing the day of the fire in the burnt plot (which was 29/3/78). Also shown is month of year.

VICTORIA BLOCK

AUTUMN BURN AT 175 KW/M

X= WEEKS SINCE BURN

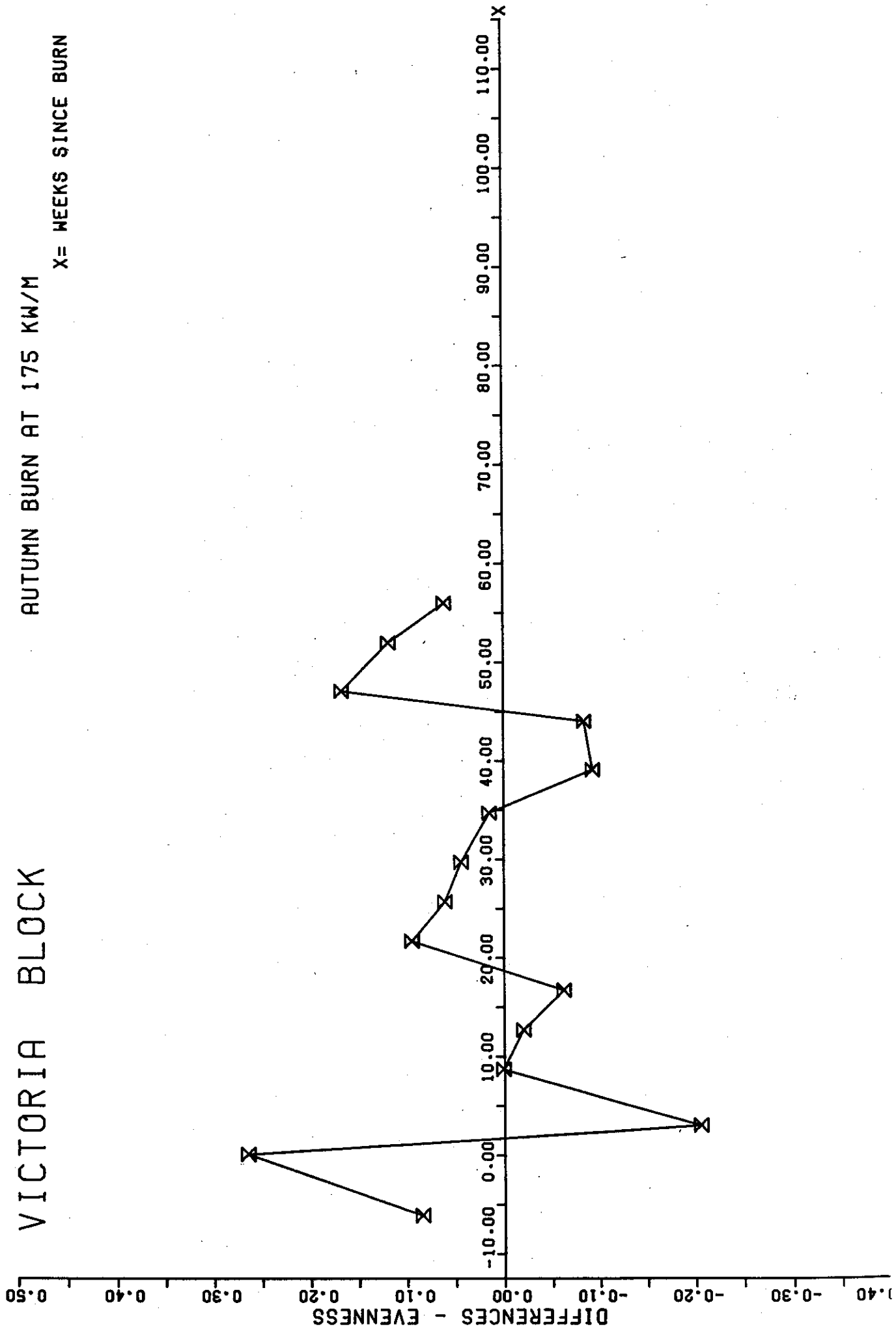


Fig. 28. Variation of evenness with time in Curaru control and 500 KW/m burn plots. Ants were sampled by using pitfall trap grids run for 7-day periods at approximately monthly intervals. The horizontal axis is scaled in weeks per centimetre with the origin representing the day of the fire in the burnt plot (which was 22/3/76).

CURARU BLOCK AUTUMN BURN

LEGEND:
CONTROL X
500 KW/M X

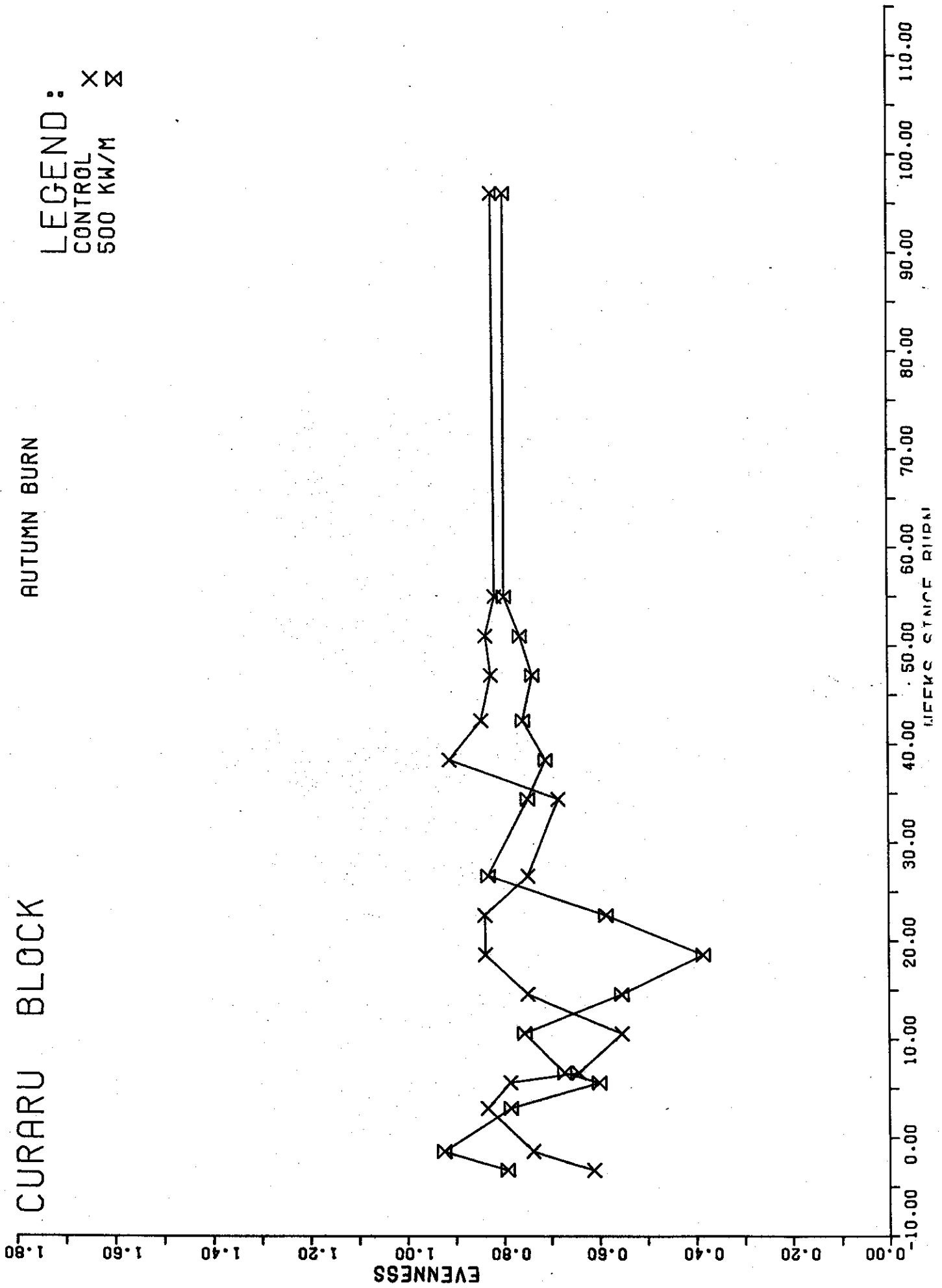


Fig. 29. Variation with time of differences in evenness for ants caught in pitfall trap grids run for 7-day periods at approximately monthly intervals in Curaru control and 500 kW/m burn plots. The horizontal axis is scaled in weeks per centimetre with the origin representing the day of the fire in the burnt plot (which was 22/3/76). Also shown is month of year.

CURARU BLOCK

AUTUMN BURN AT 500 KW/M

X= WEEKS SINCE BURN

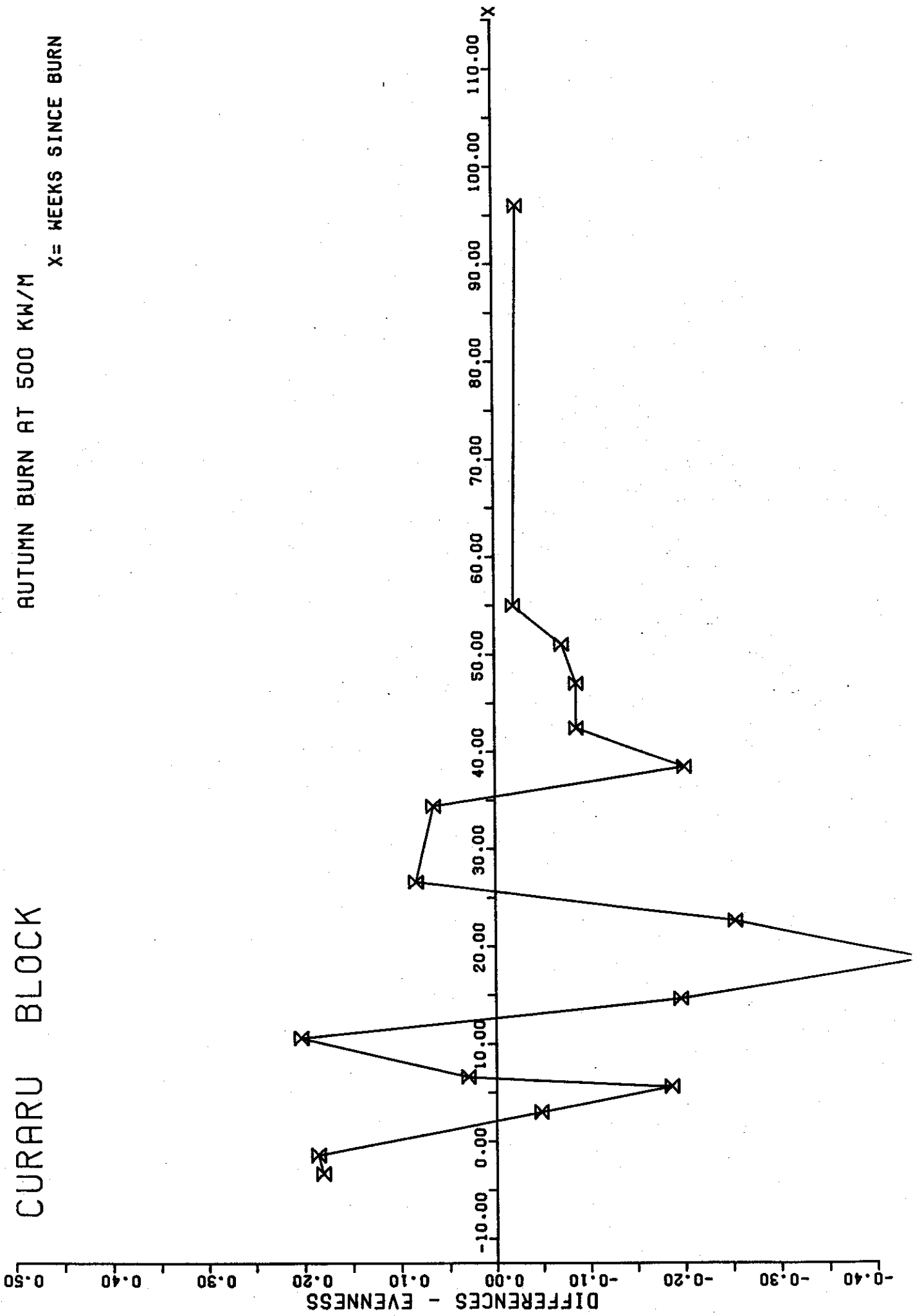


Fig. 30. Variation of evenness with time in
Pindalup control and 1500 kW/m burn plots.
Ants were sampled by using pitfall trap grids run
for 7-day periods at approximately monthly intervals.
The horizontal axis is scaled in weeks per centimetre
with the origin representing the day of the fire
in the burnt plot (which was 21/11/76).

PINDALUP BLOCK

Spring Burn

Legend:

CONTROL X
1500 KW/M X

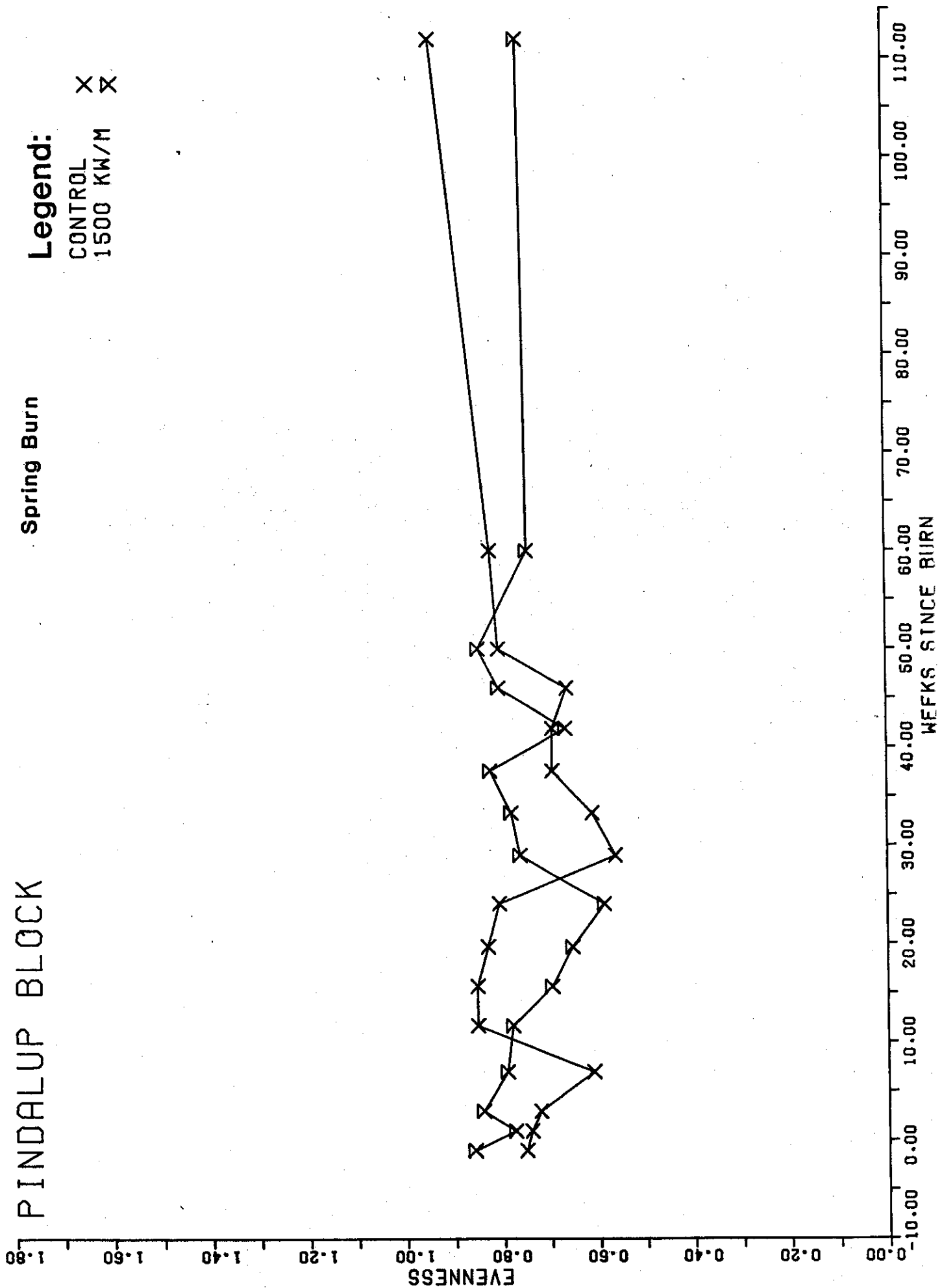


Fig. 31. Variation with time of differences in evenness for ants caught in pitfall trap grids run for 7-day periods at approximately monthly intervals in Pindalup control and 1500 kW/m burn plots. The horizontal axis is scaled in weeks per centimetre with the origin representing the day of the fire in the burnt plot (which was 21/11/76). Also shown is month of year.

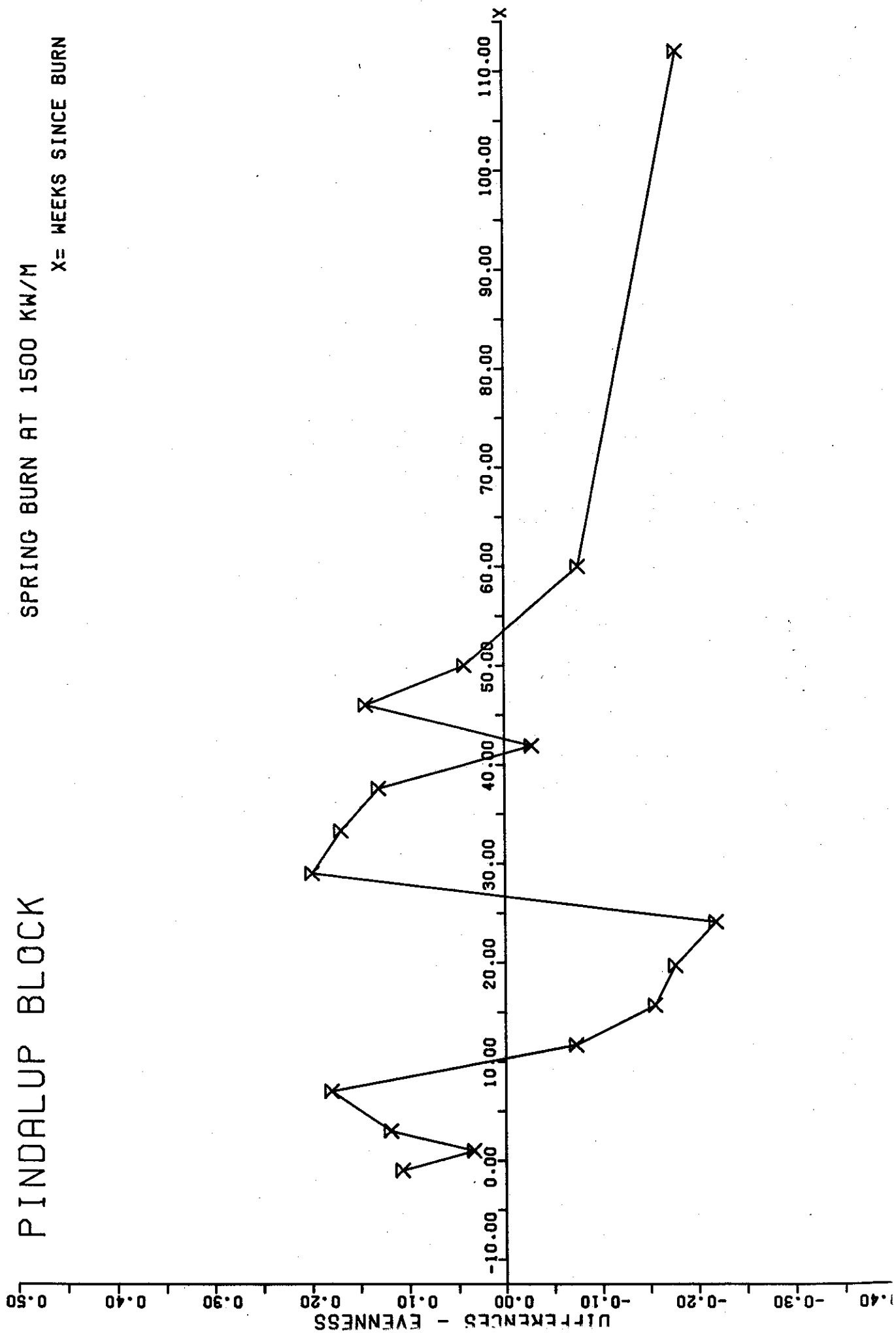


Table A. A list of the ants collected from the plots sampled with pitfall traps run for 7-day periods at approximately monthly intervals. The plots were located in Blocks in two main areas: Dwellingup (D) and Karragullen (K). All ants were assigned numbers specific to these two areas when collected and were later assigned numbers corresponding to all ants collected in all experiments conducted by the Western Australian Institute of Technology (J.D.M. numbers). Some of these ants are also in the Australian National Insect Collection (ANIC) and therefore also have ANIC numbers. The genus of each species is known and they are listed in taxonomic order. Where the ANIC number is known the J.D.M. number is not given. Where the species name is known the J.D.M. number is also given. The corresponding K or D numbers are also listed in the left-most columns.

D	K	MYRMECIINAE
	18	<u>Myrmecia</u> sp. J.D.M. 2
45		<u>M. sp.</u> J.D.M 87
72	56	<u>M. sp.</u> J.D.M 153
57	14	<u>M. sp.</u> J.D.M 154
61		<u>M. sp.</u> J.D.M 201
	45	<u>M. sp.</u> J.D.M 445
PONERINAE		
96	30	<u>Brachyponera</u> <u>lutea</u> J.D.M. 30
52	43	<u>Hypoponera</u> ? <u>congrua</u> J.D.M. 165
24	23	<u>Leptogenys</u> sp. J.D.M. 88
38,69		<u>Trachymesopus</u> <u>rufonigra</u> J.D.M. 90
47		<u>T. sp.</u> J.D.M. 93
42		<u>Cerapachys</u> sp. J.D.M 91
76		<u>C. sp.</u> J.D.M. 203
73		<u>C. sp.</u> J.D.M. 205
53		<u>Discothyrea</u> sp. J.D.M 166
62		<u>D. sp.</u> J.D.M. 204
86	44	<u>Heteroponera</u> <u>imbellis</u> J.D.M. 151
49	50	<u>H. sp.</u> J.D.M. 92
15	19	<u>Rhytidoponera</u> <u>inornata</u> J.D.M 32
71	3	<u>R. violacea</u> J.D.M. 31
35		<u>Eubothroponera</u> sp. J.D.M. 89
	58	<u>E. sp.</u> J.D.M. 444
MYRMICINAE		
12,48		<u>Anisopheidole</u> <u>antipodum</u> J.D.M. 98
105	33	<u>Cardiocondyla</u> <u>nuda</u> J.D.M. 35
41		<u>Chelaner</u> sp. J.D.M. 61
3	5	<u>Monomorium</u> sp. 1 (ANIC)
1	2	<u>M. sp.</u> 2 (ANIC)
7,106		<u>M. sp.</u> 3 (ANIC)
4		<u>M. sp.</u> J.D.M. 100
8		<u>M. sp.</u> J.D.M. 102
	1	<u>M. sp.</u> J.D.M. 198
	40	<u>Oligomyrmex</u> J.D.M. 440
63,64		<u>Pheidole</u> <u>tatigena</u> J.D.M. 37
	24	<u>P. sp.</u> J.D.M. 399
	36	<u>Podomyrma</u> sp. J.D.M. 365
58		<u>P. sp.</u> J.D.M. 161
106	39	<u>Solenopsis</u> sp. J.D.M. 34
5		<u>Tetramorium</u> sp. 5 (ANIC)
27		<u>T. sp.</u> 6 (ANIC)
84		<u>T. sp.</u> J.D.M. 206
	29	<u>T. sp.</u> J.D.M. 454
	13	<u>T. sp.</u> J.D.M. 458
26		<u>Crematogaster</u> sp. 3 (ANIC)
31		<u>C. sp.</u> 6 (ANIC)
102	37	<u>C. sp.</u> J.D.M. 33
	51	<u>Epopostruma</u> sp. J.D.M. 159
94		<u>E. sp.</u> J.D.M. 346
	42	<u>E. sp.</u> J.D.M. 413
70		<u>Strumigenys</u> <u>perplexa</u> J.D.M. 208
67		<u>Meranoplus</u> sp. 11 (ANIC)
23,40	9	<u>M. sp.</u> 12 (ANIC)

33		M. sp. 13 (ANIC)
	20	M. sp. J.D.M. 42 (b)
98		M. sp. J.D.M. 158
75		M. sp. J.D.M. 207
	48	Mymicinae genus indet. J.D.M 438

DOLICHODERINAE

78	35	Diceratoclinea J.D.M. 211
	61	Hypoclinea J.D.M. 233
	38	Tapinoma J.D.M. 134
89,91		Bothriomyrmex? sp. J.D.M. 374
2	22	Iridomyrmex conifer J.D.M 72
16,22,56	10	I. darwinianus J.D.M. 54
44	15	I. glaber J.D.M. 83
100		I. nitidus J.D.M. 373
79	16	I. purpureus J.D.M. 47
92	25	I. sp. 18 (ANIC)
9	53	I. sp. 19 (ANIC)
20	28	I. sp. 20 (ANIC)
19		I. sp. 21 (ANIC)
46		I. sp. 22 (ANIC)
54		I. sp. J.D.M. 9
90		I. sp. J.D.M. 353
	11	I. sp. J.D.M. 449

FORMICINAE

18,93		Camponotus nr. claripes gp. J.D.M. 63
21		C. nr. claripes gp. J.D.M. 110
85		C. nr. claripes gp. J.D.M. 183
83		C. nr. consobrinus gp. J.D.M. 25
30	54	C. nr. innexus gp. J.D.M. 108
10		C. michaelsoni J.D.M. 68
34		C. ? obniger J.D.M. 104
50	34	C. sp. J.D.M. 27
	26	C. sp. J.D.M. 48
39		C. sp. J.D.M. 105
51		C. sp. J.D.M. 106
11	57	C. sp. J.D.M. 107
66,82,104	4	C. sp. J.D.M. 199
74		C. sp. J.D.M. 212
	17	C. sp. J.D.M. 229
	60	C. sp. J.D.M. 357 (a)
	32	Notostigma sanguinea J.D.M. 410
99		Polyrhachis sp. J.D.M. 372
28,103	12	Melophorus sp. 1 (ANIC)
29		M. sp. 2 (ANIC)
14,32	6	M. sp. 3 (ANIC)
6,95		M. sp. 7 (ANIC)
37		M. sp. J.D.M. 112
25	27	M. sp. J.D.M. 117
59		M. sp. J.D.M. 209
	8	M. sp. J.D.M. 221
65		Notoncus gilberti J.D.M. 210
	46	N. hickmani J.D.M. 187
36		Prolasius sp. 3 (ANIC)
88		P. sp. J.D.M. 376
	55	P. sp. J.D.M. 446

?	999	Plagiolepidini sp. J.D.M. 232
	41,49	Acropyga sp. J.D.M. 189
	47	<u>Stigmatocros aemula</u> J.D.M. 386
17		<u>S. sp. J.D.M. 113</u>
43		<u>S. sp. J.D.M. 114</u>
13		<u>S. sp. J.D.M. 115</u>
	7	<u>S. sp. J.D.M. 188</u>
55	59	<u>S. sp. J.D.M. 195</u>
97		<u>S. sp. J.D.M. 375</u>
	21	<u>S. sp. J.D.M. 443</u>

Table B1. Total ants of each species obtained from pitfall trap grids run for 7-day periods at approximately monthly intervals in Playvins control plot. The number of weeks that the sample was taken prior to and after the experimental burn is shown as are the total ant individuals and species for each sampling period. The vertical line of slashes delimits those measurements taken before and after the burn in the corresponding burn plot.

ANT NUMBERS

LOCATION: PLAVINS DAY OF BURN WITHIN YEAR OF BURN 99

JDM NAME

WEEKS:
MONTH:-4.7 -0.7 / 0.3 4.3 8.3 12.7 18.7 22.3 28.3 32.9 35.3 40.3 45.3 47. 52. 103. 150. 202.
MAR APR / APR MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR FEB FEB

CONTROL

PAGE 2

134	TAPINOMA	30	6	12	1	1	5	40	64	318	52	2	7	6	127	14	16
374	BOTHRIOMYRMEX SP.	30	6	12	1	1	5	40	64	318	52	2	7	6	127	14	16
72	IRIDOMYRMEX CONFIR.	6	30	7	24	70	60	57	38	100	83	56	166	71	13	39	40
54	IRIDOMYRMEX DARWINIANUS	1	1	1	1	1	1	8	4	6	2	2	2	2	1	1	2
83	IRIDOMYRMEX GLABER																
373	IRIDOMYRMEX NITIDUS																
47	IRIDOMYRMEX PURPUREUS																
11	IRIDOMYRMEX SP.18 (ANIC)																
22	IRIDOMYRMEX SP.19 (ANIC)																
84	IRIDOMYRMEX SP.20 (ANIC)																
85	IRIDOMYRMEX SP.21 (ANIC)																
86	IRIDOMYRMEX SP.22 (ANIC)																
9	IRIDOMYRMEX SP.																
353	IRIDOMYRMEX SP.																
449	IRIDOMYRMEX SP.																
63	CAMPONOTUS NR. CLARIPES GP.																
110	CAMPONOTUS NR. CLARIPES GP.																
183	CAMPONOTUS NR. CLARIPES GP.																
25	CAMPONOTUS NR. CONSOBRINUS GP.																
213	CAMPONOTUS NR. CONSOBRINUS GP.																
108	CAMPONOTUS NR. CONSOBRINUS GP.																
68	CAMPONOTUS MICHAELSENI	5	8	2	7	7	1	3	1	3	10	12	5	5	26	4	4
104	CAMPONOTUS ? OBNIGER																
27	CAMPONOTUS SP.																
48	CAMPONOTUS SP.																
105	CAMPONOTUS SP.																
106	CAMPONOTUS SP.																
107	CAMPONOTUS SP.																
199	CAMPONOTUS SP.																
212	CAMPONOTUS SP.																
229	CAMPONOTUS SP.																
357	CAMPONOTUS SP.																
410	NOTOSTIGMA SANGUINEA																
372	POLYRACHIS SP.																
52	MELOPHORUS SP.1 (ANIC)																
53	MELOPHORUS SP.2 (ANIC)																
60	MELOPHORUS SP.3 (ANIC)	1															
111	MELOPHORUS SP.7 (ANIC)																
112	MELOPHORUS SP.																
117	MELOPHORUS SP.																
209	MELOPHORUS SP.																
221	MELOPHORUS SP.																
210	NOTONCUS GILBERTI																
187	NOTONCUS HICKMANI																
109	PROLASIUS SP.3 (ANIC)																
376	PROLASIUS SP.3																
446	PROLASIUS SP.3																
232	PLAGIOLEPIDINI SP.																
189	ACROPYGA SP.																
386	STIGMACROS AEMULA																
113	STIGMACROS SP.																
114	STIGMACROS SP.																
115	STIGMACROS SP.																
188	STIGMACROS SP.																
195	STIGMACROS SP.																
375	STIGMACROS SP.																
443	STIGMACROS SP.																
TOTAL	ANTS	90	67	1	60	96	62	42	139	154	169	1033	194	57	96	94	169
TOTAL	SPECIES	10	10	1	13	0	4	5	0	45	14	12	12	10	12	6	14

Table B2. Total ants of each species obtained from pitfall trap grids run for 7-day periods at approximately monthly intervals in Plavins 30 kw/m burn plot. The data are presented in the same way as for Table B1.

[illegible]

PAGE 2

ANT NUMBERS

LOCATION: PLAVINS DAY OF BURN WITHIN YEAR OF BURN 99 BURN INTENSITY WAS 30 KW/M

WEEKS: -4.7 -0.7 / 4.3 8.3 12.7 18.7 22.3 28.3 32.9 35.3 40.3 45.3 47. 52. 103. 150. 202.

MONTH: MAR APR / MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR FEB FEB

134	TAPINOMA	11	1	39	5	13	21	58	28	36	250	46	34	19	25	30	16	12
374	BOTHRIOMYRMEX? SP.																	
72	IRIDOMYRMEX CONFIPER	11		1														
54	IRIDOMYRMEX DARVINIANUS	12	34															
83	IRIDOMYRMEX GLABER																	
373	IRIDOMYRMEX NITIDUS																	
47	IRIDOMYRMEX PURPUREUS																	
11	IRIDOMYRMEX SP.18 (ANIC)																	
22	IRIDOMYRMEX SP.19 (ANIC)																	
84	IRIDOMYRMEX SP.20 (ANIC)	2		10	1	7	1	23	20	4	56	18	2			7	2	
85	IRIDOMYRMEX SP.21 (ANIC)																	
86	IRIDOMYRMEX SP.22 (ANIC)																	
9	IRIDOMYRMEX SP.																	
353	IRIDOMYRMEX SP.																	
449	IRIDOMYRMEX SP.																	
63	CAMPONOTUS NR. CLARIPES GP.																	
110	CAMPONOTUS NR. CLARIPES GP.	1																
183	CAMPONOTUS NR. CLARIPES GP.																	
25	CAMPONOTUS NR. CONSOBRINUS GP.																	
213	CAMPONOTUS NR. CONSOBRINUS GP.																	
108	CAMPONOTUS NR. INNEXUS GP.																	
68	CAMPONOTUS MICHAELSENI	3	1	20	1	2	1	1	1	3	12	31	13	16	32	4		9
104	CAMPONOTUS ? OBWIGER																	
27	CAMPONOTUS SP.																	
48	CAMPONOTUS SP.																	
105	CAMPONOTUS SP.																	
106	CAMPONOTUS SP.																	
107	CAMPONOTUS SP.																	
199	CAMPONOTUS SP.																	
212	CAMPONOTUS SP.																	
229	CAMPONOTUS SP.																	
357	CAMPONOTUS SP.																	
410	NOTOSTIGMA SANGUINEA																	
372	POLYTRACHIS SP.																	
52	MELOPHORUS SP.1 (ANIC)	1																
53	MELOPHORUS SP.2 (ANIC)	1																
60	MELOPHORUS SP.3 (ANIC)	4																
111	MELOPHORUS SP.7 (ANIC)	1																
112	MELOPHORUS SP.																	
117	MELOPHORUS SP.	7																
209	MELOPHORUS SP.																	
221	MELOPHORUS SP.																	
210	NOTONCUS GILBERTI																	
187	NOTONCUS HICKMANI																	
109	PROLASSIUS SP.3 (ANIC)																	
376	PROLASSIUS SP.3																	
446	PROLASSIUS SP.3																	
232	PLAGIOLEPIDINI SP.																	
189	ACROPYGA SP.																	
386	STIGMACROS AEUHULA																	
113	STIGMACROS SP.	2																
114	STIGMACROS SP.																	
115	STIGMACROS SP.																	
188	STIGMACROS SP.																	
195	STIGMACROS SP.																	
375	STIGMACROS SP.																	
443	STIGMACROS SP.																	
151	TOTAL ANTS	53	0	88	11	31	27	89	83	110	579	318	186	160	78	67	105	187
22	TOTAL SPECIES	10	0	10	6	5	7	7	19	20	24	22	16	14	10	8	10	13

Table B3. Total ants of each species obtained from
pitfall trap grids run for 7-day periods
at approximately monthly intervals in Plavins 175 kw/m burn
plot. The data are presented in the same way as for Table B1.

[illegible]

LOCATION: PLAINS DAY OF BURN WITHIN YEAR OF BURN 99

JDM NAME WEEKS: -4.7 -0.7 / 4.3 8.3 12.7 18.7 22.3 28.3 32.9 35.3 40.3 45.3 47. 52. 103. 150. 202.

MONTH: MAR APR / MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR FEB FEB

BURN INTENSITY WAS 175 KW/M

52 13 2 8 20 4 8 21 1 13 18 187 145 45 41 2 5

JDM NAME	52	13	2	8	20	4	8	21	1	13	18	187	145	45	41	2	5
134 TAPINOMA																	
374 BOTHRIOMYRMEX? SP.																	
72 IRIDOMYRMEX CONIFER	52	13	2	8	20	4	8	21	1	13	18	187	145	45	41	2	5
54 IRIDOMYRMEX DARWINIANUS	3	17															
83 IRIDOMYRMEX GLABER																	
373 IRIDOMYRMEX NITIDUS																	
47 IRIDOMYRMEX PURPUREUS																	
11 IRIDOMYRMEX SP.18 (ANIC)																	
22 IRIDOMYRMEX SP.19 (ANIC)	3	2	1							17	2	16	6	1	1	1	2
84 IRIDOMYRMEX SP.20 (ANIC)		2						4	13	4	74	19	4	12	1		
85 IRIDOMYRMEX SP.21 (ANIC)	1	1							1			31	17	9		10	
86 IRIDOMYRMEX SP.22 (ANIC)																	
9 IRIDOMYRMEX SP.									1								
353 IRIDOMYRMEX SP.																	
449 IRIDOMYRMEX SP.																	
63 CAMPONOTUS NR. CLARIPES GP.	1								1		1		2		1		
110 CAMPONOTUS NR. CLARIPES GP.																	
183 CAMPONOTUS NR. CLARIPES GP.																	
25 CAMPONOTUS NR. CONSOBRINUS GP.																	
213 CAMPONOTUS NR. CONSOBRINUS GP.																	
108 CAMPONOTUS NR. INNEXUS GP.																	
68 CAMPONOTUS MICHAELSENI	16	15	15	1	4	1	1	1	8	15	6	21	18	13	23	2	
104 CAMPONOTUS ? OBNIER	1																
27 CAMPONOTUS SP.																	
48 CAMPONOTUS SP.																	
105 CAMPONOTUS SP.																	
106 CAMPONOTUS SP.																	
107 CAMPONOTUS SP.	1	1				1	1		1	2	2	1	1	1	1	3	4
199 CAMPONOTUS SP.																	
212 CAMPONOTUS SP.																	
229 CAMPONOTUS SP.																	
357 CAMPONOTUS SP.																	
410 NOTOSTIGMA SANGUINEA																	
372 POLYRACHIS SP.																	
52 MELOPHORUS SP.1 (ANIC)																	
53 MELOPHORUS SP.2 (ANIC)																	
60 MELOPHORUS SP.3 (ANIC)	2								1	3					1		
111 MELOPHORUS SP.7 (ANIC)	1								2	11	14	4	14	2	1	8	4
112 MELOPHORUS SP.																	
117 MELOPHORUS SP.																	
209 MELOPHORUS SP.																	
221 MELOPHORUS SP.																	
210 NOTONCUS GILBERTI																	
187 NOTONCUS HICKMANI																	
109 PROLASIUS SP.3 (ANIC)																	
376 PROLASIUS SP.3																	
446 PROLASIUS SP.3																	
232 PLAGIOLEPIDINI SP.																	
189 ACROPTIGA SP.																	
386 STIGMACROS AEMULA																	
113 STIGMACROS SP.	1							1	2	1	2			2			
114 STIGMACROS SP.																	
115 STIGMACROS SP.																	
188 STIGMACROS SP.	2				2						1	1	1	10			
195 STIGMACROS SP.																	
375 STIGMACROS SP.																	
443 STIGMACROS SP.																	
TOTAL ANTS	169	64	0	33	33	13	12	33	72	86	470	338	157	216	46	25	79
TOTAL SPECIES	19	13	0	7	7	7	7	10	15	17	23	17	20	21	10	9	15

Table B4. Total ants of each species obtained from pitfall trap grids run for 7-day periods at approximately monthly intervals in Victoria control plot. The data are presented in the same way as for Table B1. The burn plot was burnt on 29/ 3/78.

ANT NUMBERS

CONTROL

LOCATION: VICTORIA DAY OF BURN WITHIN YEAR OF BURN 88

WEEK 5:

-6.1 /

-6.1 / 0-1 3.0 8

-6.1 /

WEEK:

JDM NAME

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	FEB	MAR	APR
2 MYRMEDIA SP.															
3 MYRMEDIA SP.															
4 MYRMEDIA SP.															
5 MYRMEDIA SP.															
6 MYRMEDIA SP.															
7 MYRMEDIA SP.															
8 MYRMEDIA SP.															
9 MYRMEDIA SP.															
10 MYRMEDIA SP.															
11 MYRMEDIA SP.															
12 MYRMEDIA SP.															
13 MYRMEDIA SP.															
14 MYRMEDIA SP.															
15 MYRMEDIA SP.															
16 MYRMEDIA SP.															
17 MYRMEDIA SP.															
18 MYRMEDIA SP.															
19 MYRMEDIA SP.															
20 MYRMEDIA SP.															
21 MYRMEDIA SP.															
22 MYRMEDIA SP.															
23 MYRMEDIA SP.															
24 MYRMEDIA SP.															
25 MYRMEDIA SP.															
26 MYRMEDIA SP.															
27 MYRMEDIA SP.															
28 MYRMEDIA SP.															
29 MYRMEDIA SP.															
30 MYRMEDIA SP.															
31 MYRMEDIA SP.															
32 MYRMEDIA SP.															
33 MYRMEDIA SP.															
34 MYRMEDIA SP.															
35 MYRMEDIA SP.															
36 MYRMEDIA SP.															
37 MYRMEDIA SP.															
38 MYRMEDIA SP.															
39 MYRMEDIA SP.															
40 MYRMEDIA SP.															
41 MYRMEDIA SP.															
42 MYRMEDIA SP.															
43 MYRMEDIA SP.															
44 MYRMEDIA SP.															
45 MYRMEDIA SP.															
46 MYRMEDIA SP.															
47 MYRMEDIA SP.															
48 MYRMEDIA SP.															
49 MYRMEDIA SP.															
50 MYRMEDIA SP.															
51 MYRMEDIA SP.															
52 MYRMEDIA SP.															
53 MYRMEDIA SP.															
54 MYRMEDIA SP.															

[illegible]

Table B5. Total ants of each species obtained from
pitfall trap grids run for 7-day periods
at approximately monthly intervals in Victoria 175 kw/m burn
plot. The data are presented in the same way as for Table B1.
The plot was burnt on 29/ 3/78.

LOCATION: VICTORIA DAY OF BURN WITHIN YEAR OF BURN 88									
WEEKS: -6.1 / 0.1 3.0 8.7 12.7 16.7 21.7 25.7 29.7 34.7 39.1 44.0 47.9 52. 56.									
MONTH: FEB / MAR / APR / MAY / JUN / JUL / AUG / SEP / OCT / NOV / DEC / FEB / MAR / APR									
JDM	NAME	1	2	3	4	5	6	7	8
2	MYRMECIA SP.								
3	MYRMECIA SP.								
4	MYRMECIA SP.								
5	MYRMECIA SP.								
6	MYRMECIA SP.								
7	MYRMECIA SP.								
8	MYRMECIA SP.								
9	MYRMECIA SP.								
10	MYRMECIA SP.								
11	MYRMECIA SP.								
12	MYRMECIA SP.								
13	MYRMECIA SP.								
14	MYRMECIA SP.								
15	MYRMECIA SP.								
16	MYRMECIA SP.								
17	MYRMECIA SP.								
18	MYRMECIA SP.								
19	MYRMECIA SP.								
20	MYRMECIA SP.								
21	MYRMECIA SP.								
22	MYRMECIA SP.								
23	MYRMECIA SP.								
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58	MYRMECIA SP.								
59	MYRMECIA SP.								
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61	MYRMECIA SP.								
62	MYRMECIA SP.								
63	MYRMECIA SP.								
64	MYRMECIA SP.								
65	MYRMECIA SP.								
66	MYRMECIA SP.								
67	MYRMECIA SP.								

PAGE 2

ANT NUMBERS

LOCATION: VICTORIA DAY OF BURN WITHIN YEAR OF BURN 88

JDM NAME

WEEKS: -6.1 / 0.1

MONTHS: FEB / MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

BURN INTENSITY WAS 175 KW/M

56.

JDM NAME	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	FEB	MAR	APR
134 TAINOMA	2	1	2	1	1	1	1	1	4	1	2	2	2	1
374 BOTHRIOMYRMEX? SP.														
72 IRIDOMYRMEX CONIFER			4	26		3			10	32	1	20	2	2
54 IRIDOMYRMEX DARMINIANUS	9	4	6	8	10	5	1	2	8	2	3	2	3	3
83 IRIDOMYRMEX GLABER	2	9								1		3	2	
373 IRIDOMYRMEX NITIDUS														
47 IRIDOMYRMEX PURPUREUS	34	1	3	1		1	1	11			9	13	6	7
11 IRIDOMYRMEX SP.18 (ANIC)			39						1		4	1		
22 IRIDOMYRMEX SP.19 (ANIC)														
84 IRIDOMYRMEX SP.20 (ANIC)			3			1	2			6	1	6	2	
85 IRIDOMYRMEX SP.21 (ANIC)														
86 IRIDOMYRMEX SP.22 (ANIC)														
9 IRIDOMYRMEX SP.														
353 IRIDOMYRMEX SP.														
449 IRIDOMYRMEX SP.														
63 CAMPONOTUS NR. CLARIPES GP.	12	4	16	7		1	12		5	1	10	5		
110 CAMPONOTUS NR. CLARIPES GP.														
183 CAMPONOTUS NR. CLARIPES GP.														
25 CAMPONOTUS NR. CONSOBRINUS GP.														
213 CAMPONOTUS NR. CONSOBRINUS GP.														
108 CAMPONOTUS NR. INNEXUS GP.										1				
68 CAMPONOTUS MICHAELSENI														
104 CAMPONOTUS ? OBNIER														
27 CAMPONOTUS SP.														
48 CAMPONOTUS SP.														
105 CAMPONOTUS SP.														
106 CAMPONOTUS SP.														
107 CAMPONOTUS SP.														
199 CAMPONOTUS SP.	14	3	51		1				2	11	7	9	3	1
212 CAMPONOTUS SP.														
229 CAMPONOTUS SP.		1							1					
357 CAMPONOTUS SP.										1	13			
410 NOTOSTIGMA SANGUINEA														
372 POLYRACHIS SP.														
52 MELOPHORUS SP.1 (ANIC)	27	17	14						1		84	13		
53 MELOPHORUS SP.2 (ANIC)														
60 MELOPHORUS SP.3 (ANIC)	17	13	2					1	13	3	2	27	16	4
111 MELOPHORUS SP.7 (ANIC)														
112 MELOPHORUS SP.														
117 MELOPHORUS SP.														
209 MELOPHORUS SP.														
221 MELOPHORUS SP.	14	23	16	1				4	32	2	34	16	6	4
210 NOTONCUS GILBERTI														
187 NOTONCUS HICKMANI					4		3							
109 PROLASIUS SP.3 (ANIC)														
376 PROLASIUS SP.3														
446 PROLASIUS SP.3														
232 PLAGIOLEPTIDINI SP.														
189 ACROPYGA SP.														
386 STIGMACROS AEMULA					1		4	1	1		2	1	1	
113 STIGMACROS SP.														
114 STIGMACROS SP.														
115 STIGMACROS SP.														
188 STIGMACROS SP.	4	18	11	6	1				1		1			
195 STIGMACROS SP.														
375 STIGMACROS SP.														
443 STIGMACROS SP.	3	5	2	1	1	1	1	1	1	70	55	275	168	62
TOTAL ANTS	229	190	254	35	24	14	27	24	91	70	55	275	168	31

Table B6. Total ants of each species obtained from pitfall trap grids run for 7-day periods at approximately monthly intervals in Curaru control plot. The data are presented in the same way as for Table B1. The burn plot was burnt on 22/ 3/76.

[illegible]

Table B7. Total anta of each species obtained from pitfall trap grids run for 7-day periods at approximately monthly intervals in Curaru 500 kw/m burn plot. The data are presented in the same way as for Table B1. The plot was burnt on 22/ 3/76.

[illegible]

[illegible]

Table B8. Total ants of each species obtained from pitfall trap grids run for 7-day periods at approximately monthly intervals in Pindalup control plot. The data are presented in the same way as for Table B1. The burn plot was burnt on 21/11/76.

PAGE 2

ANT NUMBERS

LOCATION: PINDALUP DAY OF BURN WITHIN YEAR OF BURN 329

JDM NAME

WEEKS: -1.0 / 1.0 3.0 7.0 11.7 15.7 19.7 24.1 29.0 33.3 37.6 41.9 46.0 50. 60. 112.

MONTHS: NOV / DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV JAN

134	TAPINOMA	39	41	28	87	8	5	15	15	54	25	48	28	59	40	18
374	BOTHRIOMYRMEX? SP.															
72	IRIDOMYRMEX CONIFER															
54	IRIDOMYRMEX DARWINIANUS	39	41	28	87	8	5	15	15	54	25	48	28	59	40	18
83	IRIDOMYRMEX GLABER	2	8	1	4	2	2	2	2	1	1	1	1	2		
373	IRIDOMYRMEX NITIDUS															
47	IRIDOMYRMEX PURPUREUS															
11	IRIDOMYRMEX SP.18 (ANIC)															
22	IRIDOMYRMEX SP.19 (ANIC)	/				3		7		1	4	1	3	4	1	
84	IRIDOMYRMEX SP.20 (ANIC)															
85	IRIDOMYRMEX SP.21 (ANIC)															
86	IRIDOMYRMEX SP.22 (ANIC)															
9	IRIDOMYRMEX SP.															
353	IRIDOMYRMEX SP.															
449	IRIDOMYRMEX SP.															
63	CAMPONOTUS NR. CLARIPES GP.	/				1		2	2	1	1	1	1	2		
110	CAMPONOTUS NR. CLARIPES GP.	/				1										
183	CAMPONOTUS NR. CLARIPES GP.	/							1							
25	CAMPONOTUS NR. CONSOBRINUS GP.															
213	CAMPONOTUS NR. CONSOBRINUS GP.															
108	CAMPONOTUS NR. INNERUS GP.															
68	CAMPONOTUS MICHAELSENI	/				3										
104	CAMPONOTUS ? OBNIER	/				1									1	
27	CAMPONOTUS SP.															
48	CAMPONOTUS SP.															
105	CAMPONOTUS SP.															
106	CAMPONOTUS SP.															
107	CAMPONOTUS SP.															
199	CAMPONOTUS SP.	28	43	12	4	21	8	9	1	9	1	17	2	38	62	
212	CAMPONOTUS SP.															
229	CAMPONOTUS SP.															
357	CAMPONOTUS SP.															
410	NOTOSTIGMA SANGUINEA															
372	POLYRACHIS SP.	/				1		3								
52	MELOPHORUS SP.1 (ANIC)	/				1										
53	MELOPHORUS SP.2 (ANIC)	/				1										
60	MELOPHORUS SP.3 (ANIC)	9	25	8	8	14	7									
111	MELOPHORUS SP.7 (ANIC)	3	8	3	4	6										
112	MELOPHORUS SP.	/				2										
117	MELOPHORUS SP.	/														
209	MELOPHORUS SP.	/				1										
221	MELOPHORUS SP.	/														
210	NOTONCUS GILBERTI	/														
187	NOTONCUS HICKMANI	/				1										
109	PROLASIUS SP.3 (ANIC)	/	1		1			1	1	17	1	4	1			
376	PROLASIUS SP.3	/	2													
446	PROLASIUS SP.3															
232	PLAGIOLEPIDINI SP.															
189	ACROPYGA SP.															
386	STIGMACROS AEMULA															
113	STIGMACROS SP.	/														
114	STIGMACROS SP.	/														
115	STIGMACROS SP.	1														
188	STIGMACROS SP.	/														
195	STIGMACROS SP.	/														
375	STIGMACROS SP.	/														
443	STIGMACROS SP.	/														
TOTAL	ANTS	122	176	104	162	132	85	59	52	81	41	106	62	133	134	273

INSTRUMENT NUMBERS

LOCATION: PINDALUP DAY OF BURN WITHIN YEAR OF BURN 329

BURN WITHIN YEAR OF BURN 329

BURN INTENSITY WAS 1500 KW/M	
29.0 33.3 37.6 41.9 46.0 50.	60. 112.
JUN JUL AUG SEP OCT NOV	JAN JAN JAN

[illegible]

ANT NUMBERS

LOCATION: PINDALUP DAY OF BURN WITHIN YEAR OF BURN 329
 WEEKS: -1.0 / 1.0 3.0 7.0 11.7 15.7 19.7 24.1 29.0 33.3 37.6 41.9 46.0 50. 60. 112.
 MONTH: NOV / DEC DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV JAN

JDM NAME	2 /	13 /	6	20	23	15	10	45	11	5	18	14	25	19	103
134 TAPINOMA	2 /					1				9	15	13			
374 BOTHRIOMYRMEX? SP.															
72 IRIDIOMYRMEX CONFIER															
54 IRIDIOMYRMEX DARWINIANUS	13 /	1													
83 IRIDIOMYRMEX GLABER															
373 IRIDIOMYRMEX NITIOUS															
47 IRIDIOMYRMEX PURPUREUS															
11 IRIDIOMYRMEX SP.18 (ANIC)															
22 IRIDIOMYRMEX SP.19 (ANIC)															
84 IRIDIOMYRMEX SP.20 (ANIC)															
85 IRIDIOMYRMEX SP.21 (ANIC)															
86 IRIDIOMYRMEX SP.22 (ANIC)															
9 IRIDIOMYRMEX SP.															
353 IRIDIOMYRMEX SP.															
449 IRIDIOMYRMEX SP.															
63 CAMPONOTUS NR. CLARIPES GP.															
110 CAMPONOTUS NR. CLARIPES GP.															
183 CAMPONOTUS NR. CLARIPES GP.															
25 CAMPONOTUS NR. CONSOBRINUS GP.															
213 CAMPONOTUS NR. CONSOBRINUS GP.															
108 CAMPONOTUS NR. INNEXUS GP.															
68 CAMPONOTUS ? OBNIIGER															
104 CAMPONOTUS SP.															
27 CAMPONOTUS SP.															
48 CAMPONOTUS SP.															
105 CAMPONOTUS SP.															
106 CAMPONOTUS SP.															
107 CAMPONOTUS SP.															
199 CAMPONOTUS SP.															
212 CAMPONOTUS SP.															
229 CAMPONOTUS SP.															
357 CAMPONOTUS SP.															
410 NOTOSTIGMA SANGUINEA															
372 POLYRACHIS SP.															
52 MELOPHORUS SP.1 (ANIC)															
53 MELOPHORUS SP.2 (ANIC)															
60 MELOPHORUS SP.3 (ANIC)															
111 MELOPHORUS SP.7 (ANIC)															
112 MELOPHORUS SP.															
117 MELOPHORUS SP.															
209 MELOPHORUS SP.															
221 MELOPHORUS SP.															
210 NOTONCUS GILBERTI															
187 NOTONCUS HICKMANI															
109 PROLASIUS SP.3 (ANIC)															
376 PROLASIUS SP.3															
446 PROLASIUS SP.3															
232 PLAGIOLEPIDINI SP.															
189 ACROPYGA SP.															
386 STIGMACROS AEMULA															
113 STIGMACROS SP.															
114 STIGMACROS SP.															
115 STIGMACROS SP.															
188 STIGMACROS SP.															
195 STIGMACROS SP.															
375 STIGMACROS SP.															
443 STIGMACROS SP.															
TOTAL ANTS	38 /	175	100	277	295	273	136	209	24	20	40	39	39	131	495
TOTAL SPECIES	13 /	22	15	21	25	24	20	10	10	6	5	8	11	13	17

LOCATION: PLAYVNS	DAY OF BURN	WITHIN YEAR OF BURN	99	CONTROL	CONFINANCES														
JDM NAME	WEEKS:	-4.7	-0.7	0.3	4.3	8.3	12.7	18.7	22.3	28.3	32.9	35.3	40.3	45.3	47.	52.	103.	150.	202.
176 TAOTNOMA	MONTH:	MAR	APR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	APR	FEB	FEB

[illegible]

Table C1. Ant species trapped per 7-day sampling period, in Plavins control plot, ranked for abundance in pitfall traps (1 is most abundant). Samples were taken at approximately monthly intervals. The number of weeks that the sample was taken prior to and after the experimental burn is shown and the vertical line of slashes delimits those measurements taken before and after the burn in the corresponding burn plots. The burn plots were burnt on 9/ 4/75.

Table C2. Ant species trapped per 7-day sampling period , in Plavins 30 kw/m burn plot, ranked for abundance in pitfall traps (1 is most abundant). The data are presented in the same way as in Table C1. The plot was burnt on 9/ 4/75.

LOCATION: PLAVINS	DAY OF BURN	WITHIN YEAR OF BURN	99
IDM NAME			
WEERS:			
	7	2	0 2 /

MAINTENANCE

PAGE 1

BURN WITHIN YEAR OF BURN		DOMINANCES		BURN INTENSITY		30 KM/H	
WEEKS:	YEAR OF BURN	99					
MAR	-4.7						
APR	-0.7						
MAY	4.3	8.3	12.7	18.7	23.3	28.3	32.9
JUN							
JUL							
AUG							
SEP							
OCT							
NOV							
DEC							
JAN							
FEB							
MAR							
APR							
MAY							
JUN							
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FEB							
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APR							
MAY							
JUN							
JUL							
AUG							
SEP							
OCT							
NOV							
DEC							
JAN							
FEB							
MAR							
APR							
MAY							
JUN							
JUL							
AUG							
SEP							
OCT							
NOV							
DEC							
JAN							
FEB							
MAR							
APR							
MAY							
JUN							
JUL							
AUG							
SEP							
OCT							

Line	Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	52
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[illegible]

DOMINANCES

PAGE 2

[illegible]

LOCATION: PLAINS DAY OF BURN WITHIN YEAR OF BURN 99																	DOMINANCES																	PAGE 1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
JDM NAME		WEEKS: -4.7 -0.7 /		MAR APR /		MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR APR FEB FEB																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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Table C3. Ant species trapped per 7-day sampling period, in Plavins 175 kw/m burn plot, ranked for abundance in pitfall traps (1 is most abundant). The data are presented in the same way as in Table C1. The plot was burnt on 9/ 4/75.

Table C4. Ant species trapped per 7-day sampling period , in Victoria control plot, ranked for abundance in pitfall traps (1 is most abundant). The data are presented in the same way as in Table C1. The burn plot was burnt on 29/ 3/78.

WEEKS:	-6.1 /	0.1	3.0	8.7	12.7	16.7	21.7	25.7	29.7	34.7	39.1	44.0	47.9	52.	56.0
MONTH:	FEB /	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	FEB	FEB	MAR	APR

DOMINANCES

PAGE 1

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Table C5. Ant species trapped per 7-day sampling period, in Victoria 175 kw/m burn plot, ranked for abundance in pitfall traps (1 is most abundant). The data are presented in the same way as in Table C1. The plot was burnt on 29/ 3/78.

LOCATION: VICTORIA DAY OF BURN WITHIN YEAR OF BURN 88										DOMINANCES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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Table C6. Ant species trapped per 7-day sampling period , in Curaru control plot, ranked for abundance in pitfall traps (1 is most abundant). The data are presented in the same way as in Table C1. The burn plot was burnt on 22/ 3/76.

Table C7. Ant species trapped per 7-day sampling period , in Curaru 500 kw/m burn plot, ranked for abundance in pitfall traps (1 is most abundant). The data are presented in the same way as in Table C1. The plot was burnt on 22/ 3 76.

LOCATION: CURARU

DAY OF BURN WITHIN YEAR OF BURN 82

DOMINANCES

BURN INTENSITY WAS 500 KW/H

PAGE 1

WEEKS:

MONTH:

-3.3 -1.4 / 3.0

FEB MAR /

APR

MAY

MAY

JUN

JUL

AUG

AUG

SEP

NOV

DEC

JAN

FEB

MAR

APR

JAN

JAN

JAN

JAN

JAN

JDN NAME

2 MYRMEDIA SP.

87 MYRMEDIA SP.

153 MYRMEDIA SP.

201 MYRMEDIA SP.

445 MYRMEDIA SP.

30 BRACHYPONERA LUTEA

165 HYPONERA ? CONGRUA

88 LEPTOGENYS

90 TRACHYMESOPUS RUFOGIGRA

93 CERAPACHYS SP.

203 CERAPACHYS SP.

205 CERAPACHYS SP.

166 DISCOHYPERA SP.

204 DISCOHYPERA SP.

151 HETEROPONERA INELLIS

92 HETEROPONERA SP.

32 RHYTIDOPONERA INORNATA

31 RHYTIDOPONERA VIOLACEA

89 EUBOTROPONERA SP.

444 EUBOTROPONERA SP.

98 ANISOPHEIDOLE ANTIPODUM

35 CARDIOCONDYLA NUDA

61 CHELANER SP.

39 MONOMORIUM SP.-1 (ANIC)

103 MONOMORIUM SP.-2 (ANIC)

101 MONOMORIUM SP.-3 (ANIC)

100 MONOMORIUM SP.

102 MONOMORIUM SP.

198 MONOMORIUM SP.

440 OLIGOMYRMEX

37 PHEIDOLE LATIGENA

399 PHEIDOLE SP.

161 PODOHYPERA SP.

365 PODOHYPERA SP.

34 SOLENOPTIS SP.

36 TETRAMORIUM SP.-5 (ANIC)

95 TETRAMORIUM SP.-6 (ANIC)

206 TETRAMORIUM SP.

454 TETRAMORIUM SP.

658 TETRAMORIUM SP.

97 CREMATOGASTER SP.-3 (ANIC)

42 CREMATOGASTER SP.-6 (ANIC)

33 CREMATOGASTER SP.

159 EPOPOSTRUMA SP.

346 EPOPOSTRUMA SP.

413 EPOPOSTRUMA SP.

208 STRUMIGENYS PERPLEXA

74 MERANOPIUS SP.-11 (ANIC)

94 MERANOPIUS SP.-12 (ANIC)

96 MERANOPIUS SP.-13 (ANIC)

500 MERANOPIUS SP.

158 MERANOPIUS SP.

207 MERANOPIUS SP.

438 MYMICINAE GENUS INDET.

211 DICERATOCLINEA SP.

233 HYPOCLITHEA

Table C8. Ant species trapped per 7-day sampling period , in Pindalup control plot, ranked for abundance in pitfall traps (1 is most abundant). The data are presented in the same way as in Table C1. The burn plot was burnt on 21/11/76.

PAGE 1

WEEKS:	-1.0	1.0	3.0	7.0	11.7	15.7	19.7	24.1	29.0	33.3	37.6	41.9	46.0	50.	60.	112.
MONTH:	NOV	DEC	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	JAN	JAN

2	MYRMECIA SP.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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	CONTROL						
LOCATION:	PINDALUP	DAY OF BURN WITHIN YEAR OF BURN	329				
JOM NAME		WEEKS:	-1.0 / 1.0	3.0	7.0	11.7	15.7
		MONTH:	NOV / DEC	JAN	FEB	MAR	APR
				MAY	JUN	JUL	AUG
				SEP	OCT	NOV	JAN
				JAN	JAN		

DOMINANCES

PAGE 2

[illegible]

Table C9. Ant species trapped per 7-day sampling period, in Pindalup 1500 kw/m burn plot, ranked for abundance in pitfall traps (1 is most abundant). The data are presented in the same way as in Table C1. The plot was burnt on 21/11/76.

WEEKS:	-1.0	/	1.0	3.0	7.0	11.7	15.7	19.7	24.1	29.0	33.3	37.6	41.9	46.0	50.	60.	112.
MONTH:	NOV	/	DEC	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	JAN	JAN

[illegible]

LOCATION: PINDALUP DAY OF BURN WITHIN YEAR OF BURN 329
 JDM NAME WEEKS: -1.0 / 1.0 3.0 7.0 11.7 15.7 19.7 24.1 29.0 33.3 37.6 41.9 46.0 50. 60. 112.
 MONTH: NOV / DEC DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV JAN

DOMINANCES

BURN INTENSITY WAS 1500 KW/H

134	TAPINOMA	4	1	11	1	1	2	1	1	2	7	2
374	BOTHRIOMYRMEX? SP.	4	1	11	1	1	2	1	1	2	7	2
72	IRIDOMYRMEX CONIFER	1	6	6	6	5	4	3	2	1	2	7
54	IRIDOMYRMEX DARMINIANUS	5	12									
83	IRIDOMYRMEX GLABER	5	12									
373	IRIDOMYRMEX NITIDUS	5	12									
47	IRIDOMYRMEX PURPUREUS											
11	IRIDOMYRMEX SP.18 (ANIC)	/						7				4
22	IRIDOMYRMEX SP.19 (ANIC)	/				8	8	6		4	10	6
84	IRIDOMYRMEX SP.20 (ANIC)	/			12		9					
85	IRIDOMYRMEX SP.21 (ANIC)	/				10		8			14	
86	IRIDOMYRMEX SP.22 (ANIC)	/										
9	IRIDOMYRMEX SP.	/					11					
353	IRIDOMYRMEX SP.	/					11					
449	IRIDOMYRMEX SP.	/										
63	CAMPONOTUS NR. CLARIPES GP.	/				10					10	
110	CAMPONOTUS NR. CLARIPES GP.	4	8		12	9	6	9	4	3	3	2
183	CAMPONOTUS NR. CLARIPES GP.	/						9				10
25	CAMPONOTUS NR. CONSOBRINUS GP.	/						8				
213	CAMPONOTUS NR. CONSOBRINUS GP.	/										
108	CAMPONOTUS NR. INNECUS GP.	/										
68	CAMPONOTUS MICHAELSENI	/										
104	CAMPONOTUS ? DBNIGER	/						8			5	
27	CAMPONOTUS SP.	/										
48	CAMPONOTUS SP.	/										
105	CAMPONOTUS SP.	/			14		10		4			
106	CAMPONOTUS SP.	/	12		9							
107	CAMPONOTUS SP.	/										
199	CAMPONOTUS SP.	/	12		5	6	8	6	1	4	3	1
212	CAMPONOTUS SP.	/			14							10
229	CAMPONOTUS SP.	/										
357	CAMPONOTUS SP.	/										
410	NOTOSTIGMA SANGUINEA	/										
372	POLYRACHIS SP.	/	12									
52	MELOPHORUS SP.1 (ANIC)	/	12		9							
53	MELOPHORUS SP.2 (ANIC)	/			13		11					
60	MELOPHORUS SP.3 (ANIC)	/	1		3	2	2	4			5	5
111	MELOPHORUS SP.7 (ANIC)	4	3		7	3	3	9	4		6	8
112	MELOPHORUS SP.	/						7				
117	MELOPHORUS SP.	/										
209	MELOPHORUS SP.	/	10		8							
221	MELOPHORUS SP.	/										
210	NOTONCUS GILBERTI	/										
187	NOTONCUS HICKMANI	/										
109	PROLASIUS SP.3 (ANIC)	4	12			8			6	2		9
376	PROLASIUS SP.3	/			12							
446	PROLASIUS SP.3	/										
232	PLAGIOLEPIDINI SP.	/							5			
189	ACROPYGA SP.	/										
386	STIGMACROS AEMULA	/										
113	STIGMACROS SP.	/										
114	STIGMACROS SP.	/	12			10					14	
115	STIGMACROS SP.	/										
188	STIGMACROS SP.	/										
195	STIGMACROS SP.	/	11		13		11	7			12	
375	STIGMACROS SP.	/										
443	STIGMACROS SP.	/										

Table D1. Differences between Plavina 30 kw/m burn and control plots for total ants of each species obtained from pitfall trap grids run for 7-day periods at approximately monthly intervals. A positive value indicates more ants in the burn plot. The number of weeks that the sample was taken prior to and after the experimental burn is shown as are the total ant individuals and species for each sampling period. The vertical line of slashes delimits those measurements taken before and after the fire in the burnt plot.

DIFFERENCES

PAGE 1

LOCATION: PLAVINS		DAY OF BURN WITHIN YEAR OF BURN		YEAR		BURN INTENSITY		WAS		30 KM/H		47		52		103		150		202	
JDM NAME		WEEKS:		-4.7 -0.7 /		4.3		8.3		12.7		13.7		22.3		28.3		32.9		35.3	
		MONTHS:		MAR		APR		MAY		JUN		JUL		AUG		SEP		OCT		NOV	
2	MYRMEDIA SP.																				
87	MYRMEDIA SP.			-1	/																
153	MYRMEDIA SP.			/	/																
154	MYRMEDIA SP.			/	/																
201	MYRMEDIA SP.			/	/																
445	MYRMEDIA SP.			/	/																
30	BRACHYOPONERA LUTEA			/	/																
165	HYPOPONERA ? CONGRUA			/	/																
88	LEPTOGENYS			1	/			-1	/												
90	TRACHYMESOPUS RUFONIGRA			/	/																
91	CERAPACHYS SP.			/	/																
203	CERAPACHYS SP.			/	/																
205	CERAPACHYS SP.			/	/																
166	DISCOTHYREA SP.			/	/																
204	DISCOTHYREA SP.			/	/																
151	METOPONERA IMBELIS			/	/																
92	HETEROPONERA SP.			/	/																
32	RHYTIDOPONERA INORNATA			16	2	/		10	2	8	1	4	9	5	21	28	23	9	4	14	14
31	RHYTIDOPONERA VIOLACEA			/	/																
89	EUBOTROPONERA SP.			/	/																
444	EUBOTROPONERA SP.			/	/																
98	ANISOPHEIDOLE ANTIPODUM			2	/			1	/												
35	CARDIACONDYLA NUDA			/	/																
61	CHELANER SP.			/	/																
39	MONOMORIUM SP. 1 (ANIC)			12	-10	/		1	-2	0	10	53	21	22	18	-8	0	1	53		
105	MONOMORIUM SP. 2 (ANIC)			2	/			1	/												
101	MONOMORIUM SP. 3 (ANIC)			12	9	/		2	/			1	0	2	13	28	15	10			
100	MONOMORIUM SP.			/	/																
102	MONOMORIUM SP.			2	/																
198	MONOMORIUM SP.			/	/																
440	OLIGOMYRMEX			/	/																
37	PHEIDOLE LATIGENA			/	/																
399	PHEIDOLE SP.			/	/																
161	PODOMYRMA SP.			/	/																
365	PODOMYRMA SP.			/	/																
34	SOLENOPTIS SP.			/	/																
36	TETRAMORIUM SP. 5 (ANIC)			9	/																
95	TETRAMORIUM SP. 6 (ANIC)			2	/			1	/												
206	TETRAMORIUM SP.			/	/																
454	TETRAMORIUM SP.			/	/																
458	TETRAMORIUM SP.			/	/																
97	CREMATOGASTER SP. 3 (ANIC)			1	-5	/		-1	-1	1	-3	1	2	1	-3						
42	CREMATOGASTER SP. 6 (ANIC)			-1	-1	/		-1	-3	-1	-5	-6	-3	-493	-1						
33	CREMATOGASTER SP.			/	/																
159	EPOPOSTRUMA SP.			/	/																
346	EPOPOSTRUMA SP.			/	/																
413	EPOPOSTRUMA SP.			/	/																
208	STRUMIGENYS PERPLEXA			/	/																
74	MERANOPLUS SP. 11 (ANIC)			/	/																
94	MERANOPLUS SP. 12 (ANIC)			0	-2	/															
96	MERANOPLUS SP. 13 (ANIC)			/	/																
500	MERANOPLUS SP.			/	/																
158	MERANOPLUS SP.			/	/																
207	MERANOPLUS SP.			/	/																
438	MYRMICINAE GENUS INDET.			/	/																
211	DICERATOCLINEA SP.			/	/																
233	HYPOCLINEA			/	/																

Table D2. Differences between Plavine 175 kw/m burn and control plots for total ants of each species obtained from pitfall trap grids run for 7-day periods at approximately monthly intervals. A positive value indicates more ants in the burn plot. The data are presented in the same way as for Table D1.

WEEKS: -4:7--0.7 /
MONTH: MAR APR /

52. 103. 150. 202.
APR APR FEB FEB

-97a-

LOCATION: PLAVINS		DAY OF BURN WITHIN YEAR OF BURN		DIFFERENCES												PAGE 2			
JOM-NAME	WEEKS:	MONTH:	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	APR	FEB	FEB
134 TADINOMA																			
374 BOTRIOMYRMEX? SP.																			
72 IRIOMYRMEX CONFER			22	-7															
54 IRIOMYRMEX DAMINIANS			-3	-13															
83 IRIOMYRMEX GLABER			-1																
373 IRIOMYRMEX NITIDUS																			
47 IRIOMYRMEX PURPUREUS																			
11 IRIOMYRMEX SP.18 (ANIC)																			
22 IRIOMYRMEX SP.19 (ANIC)			3	2															
84 IRIOMYRMEX SP.20 (ANIC)				2															
85 IRIOMYRMEX SP.21 (ANIC)			1	1															
86 IRIOMYRMEX SP.22 (ANIC)																			
9 IRIOMYRMEX SP.																			
353 IRIOMYRMEX SP.																			
449 IRIOMYRMEX SP.																			
63 CAMPONOTUS NR. CLARIPES GP.			1																
110 CAMPONOTUS NR. CLARIPES GP.																			
183 CAMPONOTUS NR. CLARIPES GP.																			
25 CAMPONOTUS NR. CONSOBRINUS GP.																			
213 CAMPONOTUS NR. CONSOBRINUS GP.																			
108 CAMPONOTUS NR. INNEXUS GP.																			
68 CAMPONOTUS MICHAELSENI			11	7															
104 CAMPONOTUS ? DBNIGER				1															
27 CAMPONOTUS SP.																			
48 CAMPONOTUS SP.																			
105 CAMPONOTUS SP.																			
106 CAMPONOTUS SP.																			
107 CAMPONOTUS SP.			1	1															
199 CAMPONOTUS SP.																			
212 CAMPONOTUS SP.																			
229 CAMPONOTUS SP.																			
357 CAMPONOTUS SP.																			
410 NOTOSTIGMA SANGUINEA																			
372 POLYRACHIS SP.																			
52 MELOPHORUS SP.1 (ANIC)																			
53 MELOPHORUS SP.2 (ANIC)																			
60 MELOPHORUS SP.3 (ANIC)			1																
111 MELOPHORUS SP.7 (ANIC)				-1															
112 MELOPHORUS SP.																			
117 MELOPHORUS SP.																			
209 MELOPHORUS SP.																			
221 MELOPHORUS SP.																			
210 NOTONCUS GILBERTI																			
187 NOTONCUS HICKMANI																			
109 PROLASIUS SP.3 (ANIC)																			
376 PROLASIUS SP.3																			
446 PROLASIUS SP.3																			
232 PLAGIOLEPIDINI SP.																			
189 ACROPYGA SP.																			
386 STIGMACROS AEMULA																			
113 STIGMACROS SP.			1																
114 STIGMACROS SP.																			
415 STIGMACROS SP.			2																
188 STIGMACROS SP.																			
195 STIGMACROS SP.																			
375 STIGMACROS SP.																			
443 STIGMACROS SP.																			

Table D3. Differences between Victoria 175 kw/m burn and control plots for total ants of each species obtained from pitfall trap grids run for 7-day periods at approximately monthly intervals. A positive value indicates more ants in the burn plot. The data are presented in the same way as for Table D1.

DIFFERENCES

PAGE 1

LOCATION: VICTORIA DAY OF BURN WITHIN YEAR OF BURN 88										BURN INTENSITY									
JDM NAME										WEEKS: -6.1 / 0.1 3.0 8.7-12.7-16.7-21.7 25.7 29.7 34.7 39.1 44.0 47.9 52. 56-									
MONTH: FEB / MAR APR MAY JUN JUL AUG SEP OCT NOV DEC FEB MAR APR																			
2	MYRMEDIA SP.																		
87	MYRMEDIA SP.																		
153	MYRMEDIA SP.																		
154	MYRMEDIA SP.																		
201	MYRMEDIA SP.																		
445	MYRMEDIA SP.																		
30	BRACHYOPONERA LUTEA																		
165	HYPOPONERA ? CONGRUA																		
88	LEPTOGENYS																		
90	TRACHYMESOPUS RUFONIGRA																		
93	TRACHYMESOPUS SP.																		
91	CERAPACHYS SP.																		
203	CERAPACHYS SP.																		
205	CERAPACHYS SP.																		
166	DISCOTHYREA SP.																		
204	DISCOTHYREA SP.																		
151	MYTEROPONERA IMBELIS																		
92	MYTEROPONERA SP.																		
32	MYTIDOPONERA INORNATA																		
31	MYTIDOPONERA VIOLACEA																		
89	EUBOTHRONERA SP.																		
444	EUBOTHRONERA SP.																		
98	ANISOPHEIDOLE ANTIPODUM																		
35	CARDIOCONDYLA NUDA																		
61	CHELANER SP.																		
39	MONOMORIUM SP.1 (ANIC)																		
103	MONOMORIUM SP.2 (ANIC)																		
101	MONOMORIUM SP.3 (ANIC)																		
100	MONOMORIUM SP.																		
102	MONOMORIUM SP.																		
198	MONOMORIUM SP.																		
440	OLIGOMYRMEX																		
37	PHEIDOLE LATIGENA																		
399	PHEIDOLE SP.																		
161	PODOMYRMA SP.																		
365	PODOMYRMA SP.																		
34	SOLENOPSIS SP.																		
36	TETRAMORIUM SP.5 (ANIC)																		
95	TETRAMORIUM SP.6 (ANIC)																		
206	TETRAMORIUM SP.																		
454	TETRAMORIUM SP.																		
458	TETRAMORIUM SP.																		
97	CREMATOGASTER SP.3 (ANIC)																		
42	CREMATOGASTER SP.6 (ANIC)																		
33	CREMATOGASTER SP.																		
159	EPOPOSTRUMA SP.																		
146	EPOPOSTRUMA SP.																		
413	EPOPOSTRUMA SP.																		
208	STRUMIGENYS PERPLEXA																		
74	MERANOPIUS SP.11 (ANIC)																		
94	MERANOPIUS SP.12 (ANIC)																		
96	MERANOPIUS SP.13 (ANIC)																		
500	MERANOPIUS SP.																		
158	MERANOPIUS SP.																		
207	MERANOPIUS SP.																		
438	MYRMICINAE GENUS INDET.																		
211	DICERATOCLINEA SP.																		
233	HYPOCLINEA																		

LOCATION: VICTORIA DAY OF BURN WITHIN YEAR OF BURN										DIFFERENCES											
JOM NAME										BURN INTENSITY WAS 175 KM/H											
WEEKS: -6.1 / 0.1 3.0 8.7 12.7 16.7 21.7 25.7 29.7 34.7 39.1 44.0 47.9 52. 56.																					
MONTH: FEB / MAR APR MAY JUN JUL AUG SEP OCT NOV DEC FEB FEB MAR APR																					
136	TAPINOMA																				
374	BOHRIONYMEX? SP.																				
52	IRIDOMYRMEX-CONIFER	-11	4	20	-4	-3	-1	-34	-2	-34	4	31	-8	20	1						
54	IRIDOMYRMEX DARNIANUS	-11	4	2	5	10	2	1	-1	7	2	1	2	1	3	0					
83	IRIDOMYRMEX-GLABER	2	9	-3					-1			0			2						
373	IRIDOMYRMEX NITIDUS																				
47	IRIDOMYRMEX PURPUREUS	34	1	-1	1		-1	1		11	-7	-40	9	13	6	7					
11	IRIDOMYRMEX SP.18 (ANIC)	-11	33	-3									1	1							
22	IRIDOMYRMEX SP.19 (ANIC)																				
84	IRIDOMYRMEX SP.20 (ANIC)		-1	0			0	-8	2		-6	-3	5	0	5	2					
85	IRIDOMYRMEX SP.21 (ANIC)																				
86	IRIDOMYRMEX SP.22 (ANIC)																				
9	IRIDOMYRMEX SP.																				
353	IRIDOMYRMEX SP.																				
449	IRIDOMYRMEX SP.																				
63	CAMPONOTUS NR. CLARIPES GP.	-21	-36	11	6		1	5			4	-1	-21	-31	0	-4					
110	CAMPONOTUS NR. CLARIPES GP.																				
183	CAMPONOTUS NR. CLARIPES GP.																				
25	CAMPONOTUS NR. CONSOBRINUS GP.																				
213	CAMPONOTUS NR. CONSOBRINUS GP.																				
108	CAMPONOTUS NR. INNEXUS GP.																				
68	CAMPONOTUS MICHAELSENI																				
104	CAMPONOTUS ? ORNIGER																				
27	CAMPONOTUS SP.																				
48	CAMPONOTUS SP.	-5							-1	-1		-1									
105	CAMPONOTUS SP.																				
106	CAMPONOTUS SP.																				
107	CAMPONOTUS SP.																				
199	CAMPONOTUS SP.	-71	-98	40	-8	0	-1	-9	-9	-11	8	1	-15	-4	-1	-9					
212	CAMPONOTUS SP.																				
229	CAMPONOTUS SP.																				
357	CAMPONOTUS SP.																				
410	NOTOSTIGMA SANGUINEA																				
372	POLYRACHIS SP.																				
52	MELOPHORUS SP.1 (ANIC)	-7	13	12								-11	-13	48	13						
53	MELOPHORUS SP.2 (ANIC)																				
60	MELOPHORUS SP.3 (ANIC)	14	12	-3					0	8	-16	-33	10	12	4						
111	MELOPHORUS SP.7 (ANIC)																				
112	MELOPHORUS SP.																				
117	MELOPHORUS SP.																				
209	MELOPHORUS SP.		-1						-1												
221	MELOPHORUS SP.																				
187	NOTONCUS GILBERTI	6	18	9	1				4	24	-1	-7	25	12	5	4					
109	PROLASSIUS SP.3 (ANIC)								-3	3											
376	PROLASSIUS SP.3																				
446	PROLASSIUS SP.3																				
232	PLAGIOLEPIDINI SP.																				
189	ACROPYGA SP.																				
386	STIGMACROS AEUUA																				
113	STIGMACROS SP.																				
114	STIGMACROS SP.																				
145	STIGMACROS SP.																				
188	STIGMACROS SP.																				
195	STIGMACROS SP.	4	18	-3	5	1															
375	STIGMACROS SP.																				
443	STIGMACROS SP.	2	4	2	1		1	1	1	1	-3	3	1	1							

Table D4. Differences between Curaru 500 Kw/m burn and control plots for total ants of each species obtained from pitfall trap grids run for 7-day periods at approximately monthly intervals. A positive value indicates more ants in the burn plot. The data are presented in the same way as for Table D1.

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LOCATION: CURARU		DAY OF BURN WITHIN YEAR OF BURN		82		DIFFERENCES		BURN INTENSITY WAS		500 KM/H		PAGE 2								
FDN	NAME	WEEKS:	-3.3	-1.4	3.0	5.6	6.6	10.6	14.6	18.6	22.6	26.6	34.4	38.4	42.4	47.	51.	55.	96.	148.
		MONTH:	FEB	MAR	APR	MAY	MAY	JUN	JUL	AUG	AUG	SEP	NOV	DEC	JAN	FEB	MAR	APR	JAN	JAN
134	TAPINOMA																			
374	BOTHRIOMYRMEX? SP.																			
72	IRIDOMYRMEX CONIFER																			
54	IRIDOMYRMEX DARWINIANUS		5	4		6	100	32	23	37	31	3	-2	14	6	16	-1	-4	3	13
83	IRIDOMYRMEX GLABER							-1	-1		-2		-1							
373	IRIDOMYRMEX MITIDUS																			
47	IRIDOMYRMEX PURPUREUS																			
11	IRIDOMYRMEX SP.18 (ANIC)																			
22	IRIDOMYRMEX SP.19 (ANIC)																			
84	IRIDOMYRMEX SP.20 (ANIC)																			
85	IRIDOMYRMEX SP.21 (ANIC)																			
86	IRIDOMYRMEX SP.22 (ANIC)																			
9	IRIDOMYRMEX SP.																			
553	IRIDOMYRMEX SP.																			
449	IRIDOMYRMEX SP.																			
63	CAMPONOTUS NR. CLARIPES GP.																			
110	CAMPONOTUS NR. CLARIPES GP.																			
183	CAMPONOTUS NR. CLARIPES GP.																			
25	CAMPONOTUS NR. CONSOBRINUS GP.																			
213	CAMPONOTUS NR. CONSOBRINUS GP.																			
108	CAMPONOTUS NR. INNECUS GP.																			
68	CAMPONOTUS MICHAELSENI																			
104	CAMPONOTUS ? OBNIER																			
27	CAMPONOTUS SP.																			
48	CAMPONOTUS SP.																			
105	CAMPONOTUS SP.																			
106	CAMPONOTUS SP.																			
107	CAMPONOTUS SP.																			
199	CAMPONOTUS SP.																			
212	CAMPONOTUS SP.																			
229	CAMPONOTUS SP.																			
357	CAMPONOTUS SP.																			
410	NOTOSTIGMA SANGUINEA																			
372	POLYRACHIS SP.																			
52	MELOPHORUS SP.1 (ANIC)																			
53	MELOPHORUS SP.2 (ANIC)																			
60	MELOPHORUS SP.3 (ANIC)																			
111	MELOPHORUS SP.7 (ANIC)																			
112	MELOPHORUS SP.																			
117	MELOPHORUS SP.																			
209	MELOPHORUS SP.																			
221	MELOPHORUS SP.																			
210	NOTONCUS GILBERTI																			
187	NOTONCUS HICKMANI																			
109	PROLASIUS SP.3 (ANIC)																			
376	PROLASIUS SP.3																			
446	PROLASIUS SP.3																			
232	PLAGIOLEPIDINI SP.																			
189	ACROPYGA SP.																			
386	STIGMACROS AEMULA																			
113	STIGMACROS SP.																			
114	STIGMACROS SP.																			
115	STIGMACROS SP.																			
188	STIGMACROS SP.																			
195	STIGMACROS SP.																			
375	STIGMACROS SP.																			
443	STIGMACROS SP.																			

Table D5. Differences between Pindalup 1500 kw/m burn and control plots for total ants of each species obtained from pitfall trap grids run for 7-day periods at approximately monthly intervals. A positive value indicates more ants in the burn plot. The data are presented in the same way as for Table D1.

7.0	11.7	15.7	19.7	24.1	29.0	33.3	37.6	41.9	46.0	50.	60.	112.
JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	JAN	JAN
BURN INTENSITY WAS 1500 KM/H												

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BURN INTENSITY WAS 1500 KW/M	
29.0	33.3
JUN	JUL
	AUG
	SEP
	OCT
	NOV
	JAN
	JAN

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