

several other species being planted such as *E. delegatensis*, *E. viminalis*, *E. fastigata* and *E. camaldulensis*. Red river gum (*E. camaldulensis*) tends to be planted on warmer, dryer sites and the others are used where more frost tolerance is required. There is very little disease although *Mycosphaerella* sp. has been recently observed in some coastal plantations.

Silviculture is generally intensive and rotations are expected to be about 10 years. Most companies now recognise that site preparation and weed control must be of high standard and they will also fertilise at time of planting. The foresters are generally aiming for fast-growing, uniform plantations. There is intense interest in getting the best genetic material and in tree breeding. Container grown stock is commonly employed. Many foresters are expecting >30 m³/ha/yr.

It is interesting to speculate if this diversification into short rotation eucalypts will be a success. Certainly there is great enthusiasm and investment. And it is also interesting to ask why the West Australians have also followed a similar path and we have not, with the exception of some relatively small-scale plantings (1000 ha per year) in Southland. Is it our poorer growth rates, disease problems, lack of suitable easy contour land, the lack of investment capital? Or is it that we haven't caught the 'fever'?

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Eucalyptus nitens age three years planted at 5 x 1.5 m spacing. Near Santa Fe, Chile. Photo D.J. Mead



One-year-old *Eucalyptus globulus* planted at 1600 stems/ha and with soil ripped to 80 cm. Note complete weed control. Photo D.J. Mead.

Paul Bunyan – conservationist

Aldo Leopold, ecologist before the word became fashionable, is widely regarded as the West's first apostle of a new "ethic of conservation" based on deliberate political choice. His "Sand County Almanac" published in 1949 called for radical change in "Man's relation to the land and the animals and plants which grow upon it" – to replace the orthodox God-given "dominion over all the earth" (Genesis 1, 26) and His ecologically unsound injunction to "be fruitful and multiply and replenish the earth and subdue it" (Genesis 2, 26).

Less well known is an earlier (1941) call for such an ethic from W.H. Auden, perhaps the greatest poet then living in America, in his libretto for an operetta scored by Benjamin Britten – probably the most accomplished composer then in America – about Paul Bunyan – undoubtedly the greatest and most pervasive folk-hero ever created in America. When first performed on a University Campus, Britten's "Choral Operetta" ran for less than a week and was then buried for 30 years. It was revised and extracts performed at music festivals in the 1970s but not until 1976, the last year of Britten's life and three years after Auden's death, was it presented in its entirety – on radio. In 1988 it was recorded by the Plymouth Music Series of Minnesota, one of the several States which claims Paul Bunyan as its son, and won international acclaim, including an international prize.

Auden wrote in his introductory press account of Paul Bunyan in 1941: "America is unique in being the only country to

create myths after the occurrence of the Industrial Revolution". Paul was not only the demigod of loggers – who have never needed an industrial revolution, extolling the virtues of sheer size and strength of man, ox and, later, dozer. Because the logging industry spread from Maine to Oregon, he was also the universal pioneer – taming nature raw in tooth, claw and axe, then moving on to work similar wonders in such improbable arenas as big business (macaroni farming) and the US Marine Corps. Paul was Action Man

"Where the dream becomes the fact
I am the Eternal Guest,
I am Way,
I am Act"

is the final statement in Auden's libretto. He is the epitome of "hesomeness", moral philosopher and, ultimately, when "gone, the natural disciplines and the life of choice begins", a credible conservationist.

Story-teller Perry Allen recorded tales of Paul Bunyan collected by Esther Shepherd in the 1920s and now in the archives of the Library of Congress in Washington. He had no doubts about his origins. "He was born in Maine. When he was three weeks old he was such a lummo of a kid that he wallowed around so much in his sleep that he rolled down four square miles of standing timber. Well, the natives wouldn't stand for that so they built him a floating cradle and anchored it out at East Port, Maine. Every time he rocked in that cradle, he caused a 75-foot tide in the Bay of Fundy. And it destroyed several villages and lots of lives were lost. And

when he got asleep they couldn't wake him howsoever, so they called the British Navy out and fired broadsides for seven hours. Well, when they did awake him, he was so excited over so much excitement that he tumbled overboard into the ocean. And he raised the water so it sunk seven warships. Well, the natives wouldn't stand for that so they captured his cradle and out of the cradle they made seven more ships. But the tide in the Bay of Fundy is a 'go in' yet".

Paul grew apace, teamed up with Babe the great blue ox – "seven axe handles wide between the eyes" – and together they achieved such feats as the creation of the Great Lakes (by hauling a whole section of land – 150 acres at a time – to landings, then sifting out the logs, leaving the flooded holes behind) and the beginning of the Mississippi (which had its origins in a burst water tank that Paul was using to ice over skidding trails).

The Auden libretto after an historical prologue of ballad couplets opens in "a forest full of innocent beasts" where "there are none who blush at the memory of an ancient folly . . . it is America – but not yet". Paul assembles a crew of Swedes "strong in the arm and dull in the head", a pair of cooks, a bookkeeper – Johnny Inkslinger, a lively man "of speculative and critical intelligence" – and miscellaneous camp pets, who provide metaphysical soprano comment. Paul is joined by Tiny, his daughter from an unhappy marriage. (Robert Frost wrote that Paul had found his wife in the heart of a white pine

– in a log pond!) They conquer the wilderness and eventually disperse to such civilised pursuits as farming, engineering, hotel management and film stardom. In the process there is a fight between Paul and his stolid logging foreman Helson – interpreted by an academic commentator Daniel Hoffman in 1952 as "class struggle crudely burlesqued". There is satire – of reactionary politics, advertising ("soups for success . . . beans for beauty") and intellectual vanity; there is wisdom – "all but heroes are unnerved when life and love must be deserved". There is wit; there is the incongruity of pantomime (though a Western Union messenger on a bicycle delivering a telegram from the King of Sweden in the primaeval forest is no less probable than the British Navy in the Bay of Fundy).

The music too is magic; but most important is the superb libretto which provides the finale to the operetta and which is both excuse and justification for this note.

The campfire embers are black and cold,
The banjos are broken, the stories are told,
The woods are cut down, and the young
grown old.

From a Pressure Group that says I am the
Constitution,
From those who say Patriotism and mean
Persecution,

From a Tolerance that is really inertia and
disillusion: Save animals and men.

The echoing axe shall be heard no more
Nor the rising scream of the buzzer saw
Nor the crash as the ice-jam explodes in
the thaw.

From entertainments neither true nor
beautiful nor witty,
From a home spun humour manufactured
in the city,
From the dirty-mindedness of a Watch
Committee: Save animals and men.

Don't leave us Paul. What's to become of
America now?

Everyday America's destroyed and recre-
ated,
America is what you do,
America is I and you,
America is what you choose to make it.

No longer the logger shall hear in the Fall,
The pine and the spruce and the sycamore
call.

Goodbye, dear friends.
Goodbye, Paul.

From children brought up to belief in self-
expression,
From the theology of plumbers and the
medical profession,
From depending on alcohol for self-
respect and self-possession
Save animals and men.

Dennis Richardson

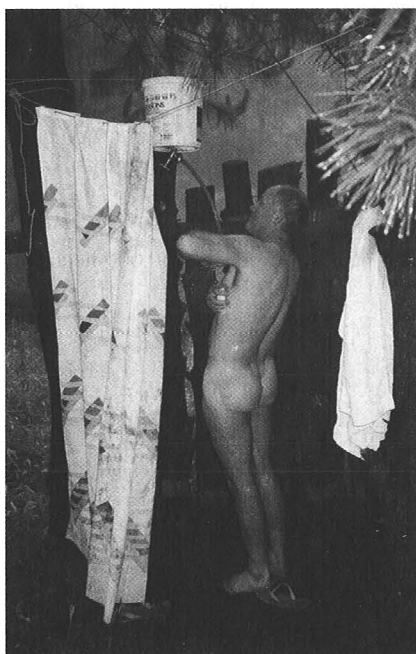
THANKS TO HAMISH LEVACK

Hamish Levack, the Man from Mauritius, has stepped down as editor after two years' service. Hamish's editorials have always been characterised by the questions they raise, no matter how controversial. This is in keeping with the Journal's key roles which, along with informing the Institute's members, are to raise new ideas and provide a forum for vigorous quality debate.

I am sure you will all join with me in thanking Hamish for his excellent contribution toward these ends. It is now up to myself and the members to maintain the standards. If you have something to say about an article or commentary then don't just talk about it, write about it! The Journal seeks and welcomes your views.

To kick it off: is Hamish putting on weight? See photograph.

Chris Perley



Multiple use forestry. An ingenious radiata pine ablation system constructed and fashioned by our esteemed ex-editor.

BELIEVE IT, OR NOT

"We are all in the business of planting trees for our children and our grandchildren, or we have no business to be in politics at all. We are not a one-generation party. We do not intend to let Britain become a one-generation society. Let us not forget the lessons of history; the long term always starts today."

Margaret Thatcher
1987 Conservative Party
Conference

A cynic would say she had a good speech writer, yet the philosophy is admirable. Ed.