

Forest History Association of BC (FHABC)

Publishers Note: (June 1, 2021)

FHABC is pleased to publish the article

“Memories of a Controversial Forestry Project in Sri Lanka”

by Hugh Marshall.

An abstract appears in [Issue 110, Summer 2021](#) and is repeated below, followed by the full article.

All images and text in the following pages are owned by and copyright of Hugh Marshall.

Hugh Marshall, RPF (Ret) (*BSc (Forestry), University of Aberdeen, Scotland; MSc, University of New Brunswick*) retired as an International Forestry Consultant in 2002. He carried out assignments in 35 countries in Asia, Africa and Latin America for industry, development agencies and non-governmental organizations, with residence on long-term projects in Malawi, Sri Lanka, Peru, China and Pakistan.

We congratulate and thank Hugh Marshall for making this material available to our members and visitors to our website, and would be pleased to publish articles about some of his other international projects.

Dave Florence

Newsletter.editor@fhabc.org

<http://www.fhabc.org>

Memories of a Controversial Forestry Project in Sri Lanka

By Hugh Marshall (RPF Ret) Living in Powell River, B.C., following significant international career experience.

Hugh Marshall describes the difficult conditions and challenges he faced during an overseas project sponsored by the Canadian International Development Agency (CIDA) and undertaken by Reid Collins & Associates, a Vancouver-based forestry consulting company. Of several CIDA contracts carried out by Reid Collins, the author recalls his assignment as Forestry

Supervisor on the Sri Lanka project in the early 1970's. The purpose of this project was to demonstrate modern logging methods in the 7,000-hectare Sinharaja Forest, located in the south-central wet zone of Sri Lanka. As one of the last remnants of virgin tropical rainforest in the country, the project attracted fierce environmental and political opposition.

An abstract appears below. Read the [full version here](#)

ABSTRACT

In 1972 I joined the B.C. team already embarked on early construction of an 11-kilometre access road to the forest through hilly rice-growing country. Planned for completion in six months, the road eventually took eighteen months, partly due to encountering more rock than expected and the heavy monsoonal rain creating unworkably deep mud. Far more significant, though, was the public outcry at project plans to extract mature trees from the sacred Sinharaja forest and the Government's response to this by setting up a Committee of Enquiry.

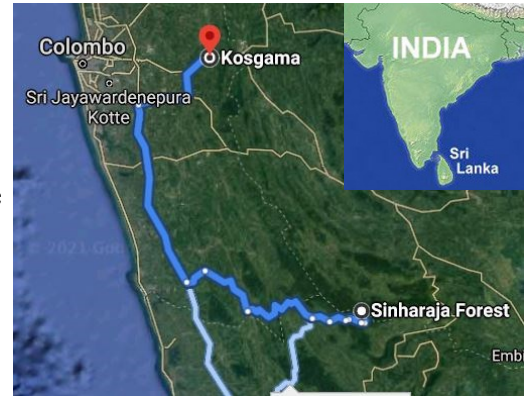
Following months of deliberating, this Committee ordered the project temporarily shut down and the team to be on 'stand-by'. After three months of

idleness and frustration for the team, CIDA forced the Government to resume the project by threatening to terminate other assistance to Sri Lanka. Once back to work, the team spent weeks repairing washouts on the abandoned access road before completing its construction.

Operations then began on cutting and skidding out selected trees over 50 cm diameter of all species for delivery to a wood-working complex at Kosgama, 90 km away. Damage to the remaining crop proved impossible to avoid given the web of cable-like vines entangling the forest canopy and causing felled trees with their huge crowns to pull down adjacent trees. Despite this, however, the forest was able to recuperate itself amazingly well. When I was invited to re-visit Sinharaja 20 years later, hardly a sign of our logging activity remained.

Project planners had been as over-optimistic about logging as they had about the access road. Instead of delivering 10 or 12 loads of logs a day to Kosgama, no more than five were ever accomplished, usually only two or three. This proved just as well because the inefficient and broken-down wood-yard facilities were unable to deal adequately even with these. At the same time our lower logging productivity helped to reduce the intensity of environmental opposition.

My fondest memories deep in the Sinharaja forest were meeting gem miners, cane cutters and resin collectors; sharing tea with them in a cave or crude leaf hut; solitary lunches feeding crumbs to fresh-water crabs and scorpions; encountering tree vipers, jungle spiders, a giant



earthworm and once a recent leopard monkey-kill. More mundane were soakings and chills from downpours in the darkened forest, and ever-present millions of land leeches. We often wondered how Sinharaja leeches survived before Canadians arrived.

Logging ceased in 1976 at the end of the project and Canadian equipment was parceled out to miscellaneous ministries and departments. In 1988, the United Nations declared the Sinharaja Forest Reserve a World Heritage Site, today visited only by occasional tourists and researchers. Peace had settled over a turbulent and forgotten fragment of shared Reid Collins' and CIDA history.

[Read here for the full version.](#)



A profile of the Sinharaja Forest at road edges. More photos in the [full version](#).



The goal of the Sinharaja project was to demonstrate mechanized logging, which meant replacing the more traditional, slower but less destructive use of elephants.

Main Article Begins: An often-neglected but nevertheless integral part of our forestry history are the numerous overseas projects carried out by B.C.-based forestry consulting and industrial companies. Most aid projects were conceived, financed and overseen by the Canadian International Development Agency (CIDA), a federal agency responsible for technical assistance to developing countries. Few probably realize that between CIDA's inception in 1968 and its closure in 2013 (having been folded into the Department of Foreign Affairs) this agency assisted in forestry to more than 100 developing countries through contracted Canadian firms.

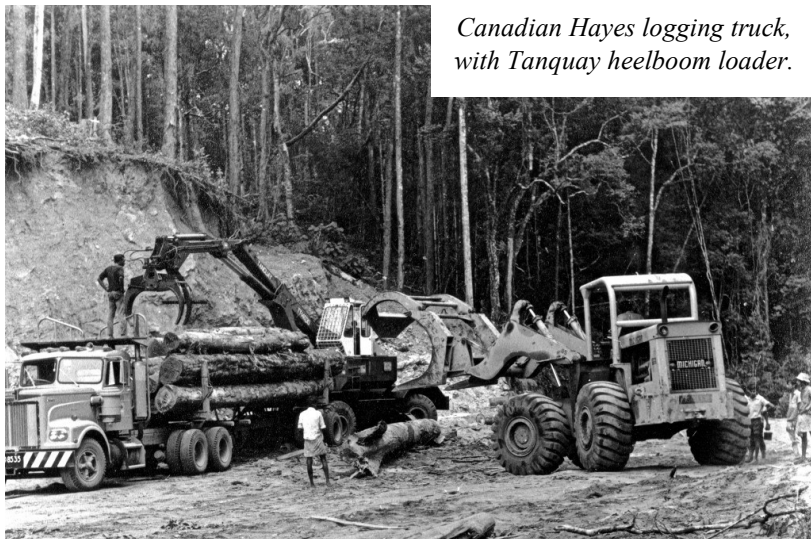
While Quebec Province firms were awarded most francophone projects, CIDA awarded many others to a rich assortment of Vancouver-based forestry consulting companies, one featured here being Reid, Collins & Associates.

Created in 1961 by Bert Reid and Jim Collins, the firm's main focus was on provincial work. But Bert's special interest was always in international work. Due to his efforts, aside from overseas private-sector work, the company over its lifetime carried out multi-year CIDA contracts in Sri Lanka, Peru, Zaire, China, Jamaica, Malawi and St. Vincent. Having participated in the first five of these projects, I chose my experiences as Forestry Supervisor on the Sri Lanka project in the early 1970s for this article. Its special interest lies in having been one of the most environmentally and politically controversial forestry projects in CIDA and Reid Collin's history.

The goal of the *Ceylon Mechanized Logging Project* was to demonstrate modern logging methods in the 7,000-hectare Sinharaja Forest located in the south-central Wet Zone of Sri Lanka. As one of the last remnants of virgin tropical rainforest in the country, CIDA fatefully conceived and negotiated this project with the Sri Lankan Government just when public environmental awareness was awakening. Buddhists had long held the Sinharaja forest sacred and viewed mechanized logging as speeding up the forest's demise, replacing the much slower, traditional and less-destructive use of elephants. To cap it off, the project's launch followed immediately in the footsteps of a 1971 national armed insurrection and the election of a socialist/communist coalition Government.



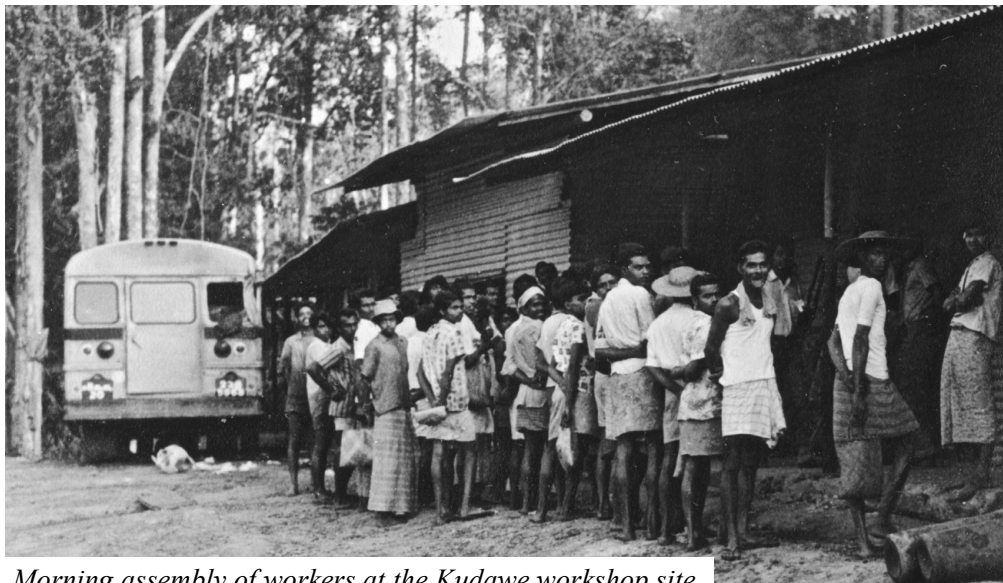
The goal of the Sinharaja project was to demonstrate mechanized logging, which meant replacing the more-traditional, slower but less-destructive use of elephants. Closely bonded to a single mahout for most of their lives, elephants are trained to understand the intention for each log and often need little guidance. Below: notice the left front leg maneuvering the log into a preliminary position for loading.



Canadian Hayes logging truck, with Tanquay heelboom loader.



I was assigned a two-year contract on this project by Reid Collins in early-1972, some months after the project's launch. An eight-person team from B.C. was already embarked on the early stages of constructing an 11-kilometre access road to the forest through a hilly rice-growing country. The project had hired some 60 operators and labourers and was equipped with Canadian bulldozers, front-end loaders, rock drill, graders, dump trucks, hoists, powers saws, skidders and a fleet of Hayes logging trucks.



Morning assembly of workers at the Kudawe workshop site.



D8 and D6 Caterpillars



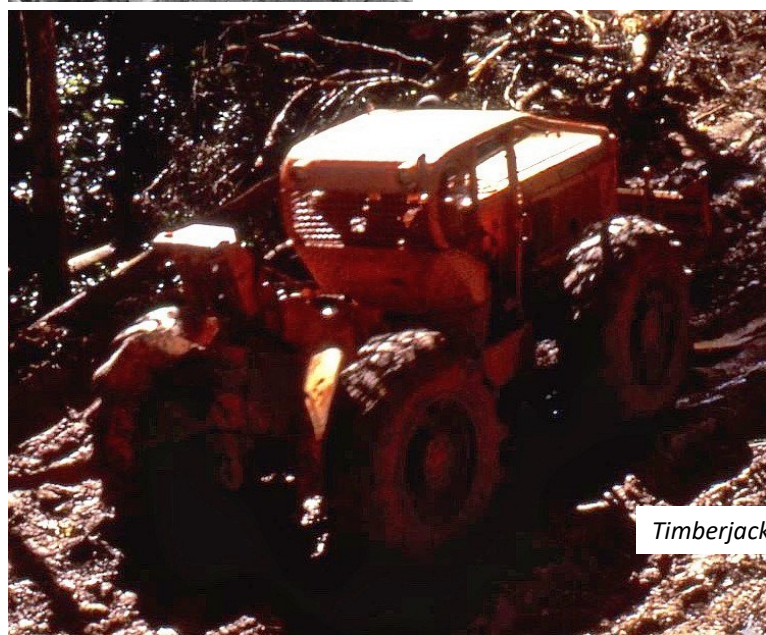
Left: The greasing crew working on the Champion road grader. This page shows examples of some of the major logging and road-building equipment brought for the project, plus Pioneer chain saws etc.



Canadian Hayes logging trucks.



Rock Driller



Timberjack 404 Skidder

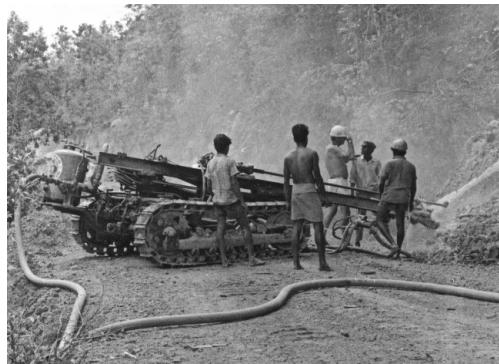


On completing the access road, the project would lay out forest roads and skid trails, cut and skid out trees over 50 centimetres diameter (above butt swell) of all but two species (this forest had some 120 tree species in total), and deliver logs to a wood-processing complex at Kosgama, some 90 kilometres away. Initially, this all seemed straightforward for an experienced project team.

It soon became obvious, though, that the access road would take far longer to construct than its planned six months (18 months as it turned out). Firstly, encountering more rock than expected called for a constant supply of explosives, which led to weeks or even months of bureaucratic delays in the aftermath of the insurrection. Secondly, churning up red laterite soil under almost daily monsoon downpours (4,000 to 5,000 mm annually) made for impossible working conditions in knee-deep mud. On one occasion at a tricky bend in the road, a determined operator of a D-6 bulldozer, hell-bent to 'beat' the elements of rain and mud at all costs, ended up with the whole roadbed spread out in a paddy field far below, leaving behind nothing but a clear rock face. Thankfully, the farmer was compensated and the team finally learned to leave earthwork well alone during rain.



A visitor to the forest showing off a grand specimen of beraliya dun (Doona cordifolia)

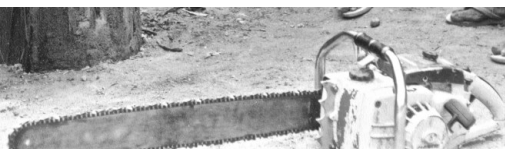


Rock drilling foreman Jagatharatne conferring with logging supervisor Jack Lewis



Above: Logging supervisor Jack Lewis maneuvering the D6 Caterpillar out of a difficult spot on the access road. Note the buried track.

Below: Canadian Pioneer Chain Saw from Peterborough.



Unloading one of the Hayes trucks at the Kosgama wood yard using an overhead crane. On days when the cranes were broken down, individual logs had to be hitched to a sturdy post and the truck driven forward, thus randomly dumping the load. It was a scene of general chaos.



Operating a hand rock drill. No workman's compensation here!



Clearing boulders from the access road with a D8 Caterpillar bulldozer after rock blasting



Construction of the access road. Sam is operating a D8 Caterpillar tractor. Assistant operator Dharmadasa is on the right.



Crews laying a culverts on the access road.

Press coverage soon followed on the heels of mounting public opposition to the project. The Government's response was to set up a Committee of Enquiry in July 1972 to investigate the Ceylon Plywood Corporation's Kosgama wood complex, and (of particular interest to us) the State Timber Corporation's plans for extracting 10 to 15 of the largest trees selected per hectare from the Sinharaja Forest.

After months of deliberations, the Committee realized that visiting the operation itself might be good public relations. So we escorted finely-dressed top-level Government officials to inspect the mud-bespattered road construction works and the (as-yet) untouched leech-infested forest, the latter being my particular responsibility. Aside from one or two brave souls taking a passing interest in the trees, most of the others spent all their time inspecting ankles to pull off leeches. No criticism there

really; I was by then getting hardened to leeches and knew how unpleasant they were for the uninitiated.

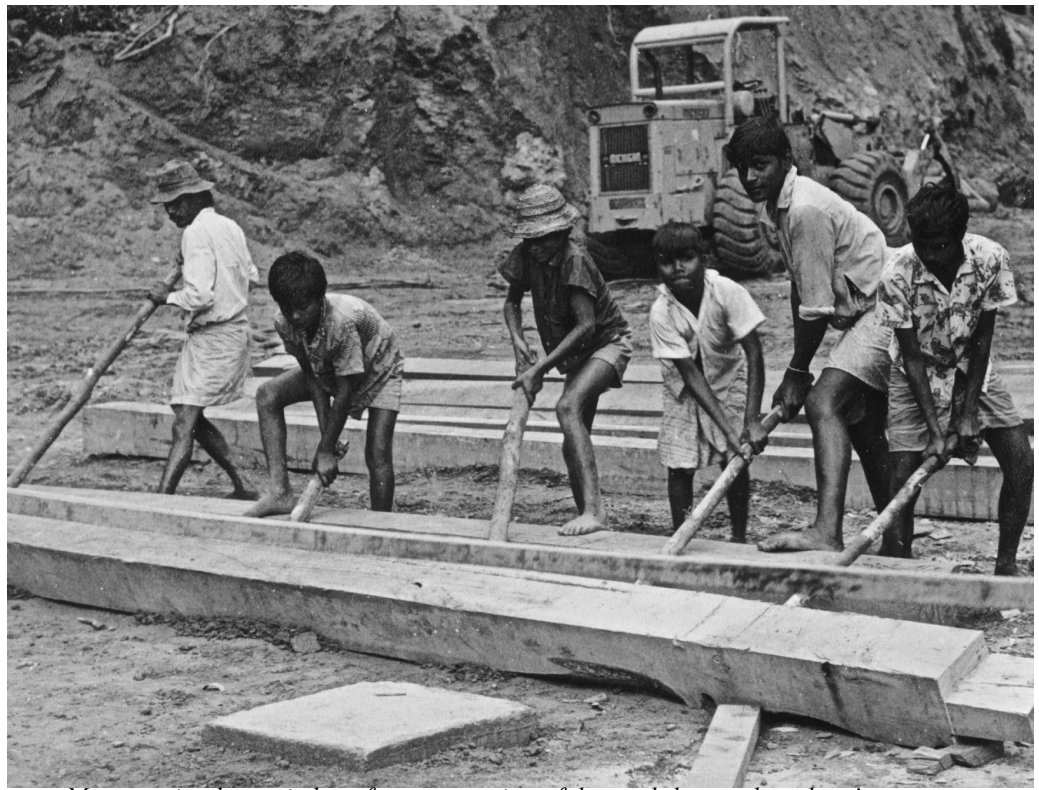
Under rising political pressure for a decision, the Committee ordered the project shut down temporarily and for the team to stay on 'stand-by' in Colombo until it made a final decision. It fell to me that fateful day to travel to the operation and instruct an astonished and angered crew to halt all work immediately, irrespective of half-completed rock drilling, grading or laying culverts, and to leave all equipment where it stood.

Shut-down and stand-by were to last three whole months. During this time the whole team remained idle and frustrated in Colombo, each day anticipating news of possible contract termination. All of us had wives and families in Colombo, but tensions ran particularly high for field supervisors accustomed to spending

each week at the worksite. Day-to-day boredom was not helped by severe shortages and rationing of food, and almost daily news and Government proclamations about the latest regulations, trials of insurgents, corruption charges and nationalization of key industries. (This latter sadly included the take-over of many of Ceylon's famous tea estates that had been well managed in private family hands for generations.)

A trivial but amusing incident at a project get-together might illustrate the level of fraying tempers at this time. One raging wife threw her gin and tonic in the face of one of our logging supervisors who happened to be dozing in a chair suffering early symptoms of dengue fever. That sparked a screaming match and physical brawl between the two respective wives while we onlookers had to smile at our dazed armchair victim left with a slice of lemon neatly balanced on his fevered forehead.

By threatening to terminate its railway assistance to Sri Lanka, CIDA finally forced the Government to resume project operations. So with great relief, we all went back to work. After weeks spent repairing washouts on the access road, the team began to progress faster and the road neared completion. Much of my time by now was spent in the forest, each day gradually acquainting myself with the main species and exploring possible road and skid-trail layouts. The Forest Department had meanwhile been selecting, marking, measuring and numbering some 10 to 15 trees per hectare over 50 cm diameter of all but two species for eventual removal.



Maneuvering large timbers for construction of the workshop and workers' quarters on a cleared site at Kudawe.



Small bridge construction towards the end of the access road.



The author beside a fine specimen of hora.
(*Dipterocarpus zeylandicus*)



A large dun (*Doona zeylandica*) log being
hauled out by a Timberjack 404 skidder,
assisted by a D6 Caterpillar.

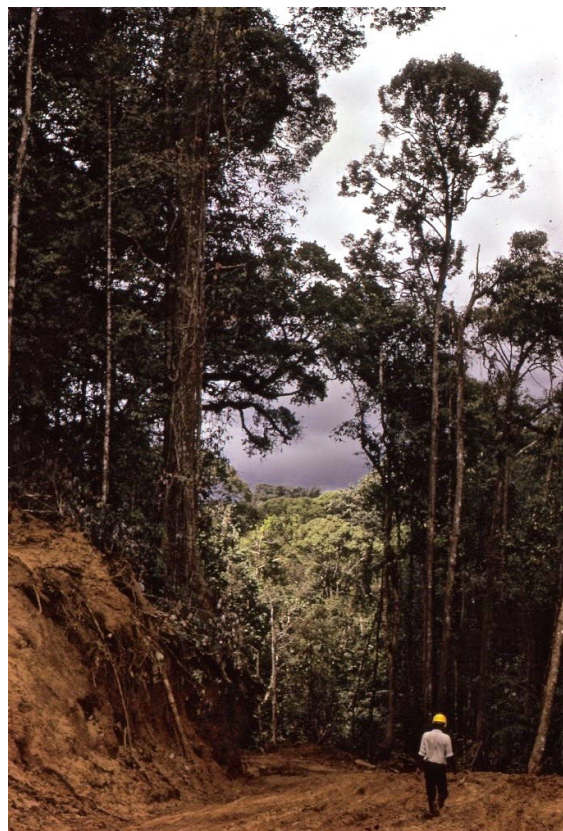
It deserves to mention that tropical rainforests of Southeast Asia and Sri Lanka, including the Sinharaja, are dominated by commercially-useful species, most of which belong to the large family *Dipterocarpaceae*, known in the trade as Philippine mahogany. Though inferior to 'true' mahogany, this timber is marketed worldwide, principally for plywood (commonly sold in Canadian lumber yards). This exceptionally high usefulness of dipterocarp forests, which contrasts sharply with the extreme diversity and far lower overall utility of African and American tropical rainforests, explains why mature trees of all but two species could be selected in the Sinharaja forest for eventual processing. By the way, of the two unwanted timber species, one was much too hard and dense, the other oozed an incredibly corrosive sap (as I learned to

my cost, having on one occasion innocently picked a sample of its foliage and been severely burned).

Falling and extracting the selected trees without undue damage to the remaining crop and to stream-beds was going to be challenging, particularly given our sensitivity to the spotlight of environmentalist groups. On the positive side, there would be plenty of large to medium-sized trees remaining, as well as thousands of saplings and seedlings competing for light in the created gaps. As in most tropical rainforests, however, a web of cable-like lianas (vines) entangling the huge tree crowns meant that felled trees would almost certainly pull down adjacent trees, causing mayhem below.

To assess post-logging crop damage, I established two one-acre plots before logging, within which I mapped and measured every tree over 10 cm diameter, noting the positions of each tree marked for removal (four or five in each plot). By re-tallying these plots after logging, I estimated that about one-third of the remaining crop basal-

area was pulverized or severely damaged by the falling and skidding out of the selected trees. As mentioned later, however, the forest was to show remarkable powers of recovery.



Profile of the Sinharaja Forest at road edges, showing large heavy crowns, and dark, fairly open, understory of vegetation where there is fierce competition for light. Some 120 tree species exist, at least 50 of which comprise the largest and most economically useful.

As the access road and key bridges neared completion, a permanent operational base was established with workshops, storage sheds and required infrastructure to house and maintain the heavy equipment. Logging operations began and the first loads of logs trickled into the Kosgama wood complex some 90 km away.

The project had been equipped with seven Hayes logging trucks on the assumption that 10 to 14 loads of logs could be delivered to the Kosgama wood complex each day on double shifts. As with the access road, project planners were grossly over-optimistic. During my remaining months on the project, the number of loads delivered per day averaged only three and never exceeded five.

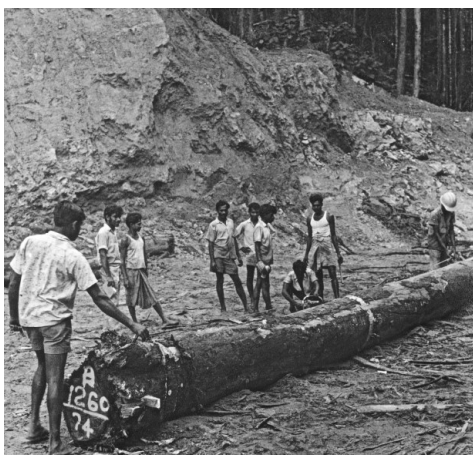
The Kosgama complex, provided by the Government of Romania a few years before, employed some 2,000 workers to turn out lumber, particleboard and tea-crate plywood. Its inefficiency was notorious. It could scarcely handle logs already being delivered from elsewhere, to say nothing of additional ones from the Sinharaja. Log-yard unloading facilities such as overhead cranes were constantly breaking down and its storage 'pond' was permanently hidden below logs piled sometimes several metres above water level. Because of this, it was therefore just as well that the project's logging productivity fell far below expectations. This slow rate of logging happened at the same time

to help relieve the worst of our environmental opposition.

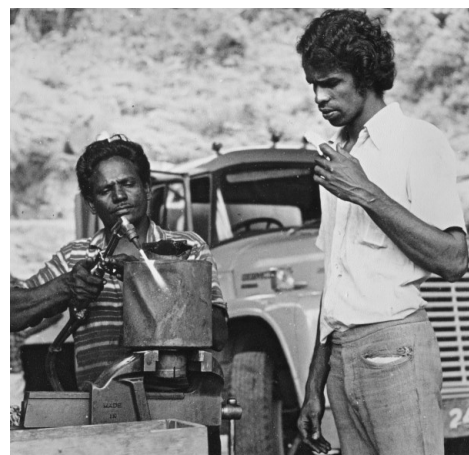
Safety first in a Canadian hard-hat, but just watch out for those toes.



Mechanical foreman Clement David instructing a young crew on the maintenance of Pioneer power saws



The scaling crew measuring up a log for cross cutting. On the butt end is the tree reference number and year, and this will be painted also on each log as it is cut.



Simon repairing an exhaust, overseen by Clement David



*The Timberjack 404 skidder hauling out a beraliya (*Doona cordifolia*) log, overseen by logging supervisor Gordon Sanderson.*



Above: Heavy work in mud 'bucking' this log. Bare feet is the best thing under such conditions.

Left: Seva cutting a hora tree. Each tree over 50 cm diameter selected by the Forest Department enumeration crew for felling is numbered below and above where the cut will be. Here the number 169 and the year 74 can be seen on the lower side. The log scalers later mark the tree for cross-cutting, and paint the tree reference number on each individual log. Thus the Forest Department maintains a register of every tree cut and the ultimate destination of each log.

Aside from project difficulties, I have the fondest memories of months spent in and around the Sinharaja forest before and after logging started, either alone or with a village guide or two. Deep in the forest there were chance meetings with gem miners, cane cutters and resin collectors, and sharing tea with them in a cave or crude leaf hut; eating lunch in solitude, feet dangling in crystal-clear streams and feeding crumbs to fresh-water crabs, scorpions and darting coloured fish, encountering tree vipers, jungle spiders, a giant earthworm (fully stretched across a skid trail) and once a very recent leopard's monkey-kill. More mundane were regular soakings and chills from torrential downpours in the darkened forest, and the ever-present millions of land leeches – anything from 20 to 50 all over the body on most days - and emerging from the forest bleeding as if machine-gunned. We wondered how the Sinharaja leeches ever survived before Canadians arrived.



Deep in the forest I enjoyed meeting the occasional gem prospector. Here is one I shared tea with while he demonstrated his operation (but was most reluctant to show his findings!).

A villager deep in the forest collecting rattan (rolled up in his hand). A rattan plant is seen above him in the background. It is armed with vicious backward-pointing sharp spines that have to be peeled off with a knife, together with the bark. In the sack are lumps of resin that are burned for ceremonial purposes.



For a lucky prospector, panning the river gravel might reveal ruby, sapphire, beryl, cat's eyes, spinel, garnet, tourmaline or topaz - all gems for which Sri Lanka is famous.



At our simple, spacious forest bungalow beside the original track, now the solid access road, my usual routine after the day's work was: wringing out pinkish water from soaking socks (leech bites bleed profusely); shower and relax with beer and peanuts, feet resting on a paper towel to catch leech left-overs; enjoy a delicious supper served by our resident cook and chat about the day's activities etc.

Depending on our numbers we usually enjoyed an hour or two of Bridge, the cook making up a four when needed. Then to bed in curtained rooms, looking up at rats travelling the rafters overhead and willing them not to fall off.

Two years after my departure from Sri Lanka in 1974 with my wife and two daughters (one born in Colombo our first year), all logging in the Sinharaja ceased in 1976 at the end of the project.

All the project equipment was distributed to sundry ministries and departments, and the Forest Department planted Honduras mahogany along skid trails.

Although relatively easy to raise as seedlings, this species is not native to Asia and thus becomes an



Spacious bungalow beside the forest access road at Weddegala designated for accommodating on-site Reid Collins personnel.

ecological misfit in an otherwise native forest. More effort could perhaps have been made to select local dipterocarp species to plant on skid trails, especially given that the Sinharaja Forest was hereafter to be preserved as one of the last remnants of native tropical rainforest in the country.

On a later assignment to Sri Lanka in 1997, I was kindly invited by a former head of the Forest Department to re-visit the Sinharaja and relish nostalgic memories. It was gratifying to see how well the

harvested areas (thankfully a relatively small part of the forest) had restored themselves after 20 years. Barely a trace of skid trails or gaps remained. The only signs of past logging activity were the occasional lines of planted mahogany, a lighter canopy here and there and a dearth of the well-remembered really large mature trees. The Sinharaja Forest had been declared a World Heritage Site and is visited now only by occasional tourists and researchers.

Peace had settled over a turbulent and forgotten fragment of shared Reid Collins' and CIDA history.

(Editors note. For further information, try this link: 2011 UN [World Heritage Site report](#) on the Sinharaja Reserve).



A typical quiet street in the district town of Ratnapura, through which the Sinharaja logs were transported on Hayes logging trucks. It was hardly surprising that the 90-kilometre journey took many hours.