Natural Durability and Preservation of One Hundred Tropical African Woods

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Abstract

The natural durability of tropical woods and their artificial preservation are two factors that determine in a great part their use in tropical countries. Even if the existing knowledge in this field appears at first glance to be extensive, it is, nevertheless, found in a great number of publications and reports of various research institutions that are scattered throughout the world. Consequently, detailed technical information is not yet readily accessible and, in addition, the numerous testing procedures and varied testing conditions make comparisons of experimental results very difficult.

The available technical information, both published and unpublished, on the natural durability and preservation of tropical African woods was collected and screened. The data have been interpreted and are presented in the form of tables for easy comparison.

Résumé

La durabilité naturelle des bois tropicaux et leur préservation artificielle sont deux facteurs qui déterminent en grande partie leur utilisation dans les pays tropicaux. Même si les connaissances existantes dans ces domaines apparaissent à prime abord relativement volumineuses, elles n'en restent pas moins morcelées dans un grand nombre de publications et rapports en provenance de différentes institutions de recherches dispersées à travers le monde. Par conséquent, des informations techniques détaillées sur tous les aspects du sujet ne sont pas encore facilement accessibles et, de plus, la pluralité des méthodes et des conditions d'essais rendent bien difficile toute comparaison des résultats expérimentaux obtenus par ces diverses institutions de recherches.

L'objectif premier du présent travail a été de rassembler et de dépouiller tous les ouvrages disponibles, inédits et publiés, sur la durabilité naturelle et la préservation des bois tropicaux africains. Par la suite, l'interprétation et la comparaison des données ainsi obtenues ont conduit à leur présentation en synthèse sous forme de tableaux synoptiques.

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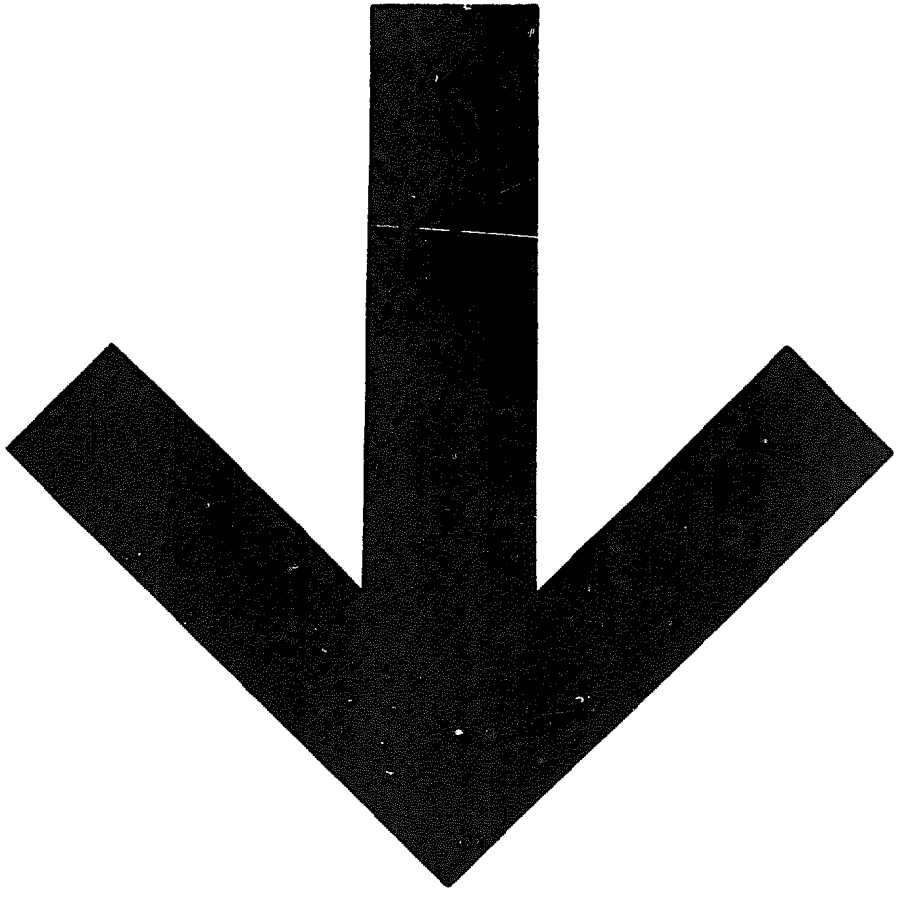

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Natural Durability and Preservation of One Hundred Tropical African Woods

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This publication was originally printed in 1974 as IDRC-017f "Durabilité naturelle et préservation de cent bois tropicaux africains" by Yves Fortin and Jean Poliquin. The senior author translated the original French text and updated the information. The manner of presentation has been altered to make the book easier to use.

Contents

Introduction

Increased access to the existing knowledge on the natural durability and artificial preservation of the most important tropical African woods will assist African countries in their efforts toward better and greater use of their forest species. In addition, this information will help define future research needs so that studies based on internationally standardized testing procedures will be able to fill gaps in existing knowledge.

The primary aim of this work was to collect and screen the available technical information on the natural durability and preservation of tropical African woods. The data have been interpreted and are presented in the form of tables for easy comparison.

In collecting the technical information, we obtained the collaboration of various institutions; however, most of the publications were obtained from the library of the Faculté de Foresterie et Géodésie of l'Université Laval and from the National Science Library, National Research Council of Canada. The bibliographic list given at the end of this book includes both the references directly used to compile the technical data and those consulted for basic information.

One hundred tropical African woods were selected for this study. The criterion used for the selection of the first 44 woods was total annual exports (OCDE 1968). However, because of a lack of adequate data regarding statistics on exportation, production, and availability, the selection of the other 56 woods was made according to the volume of useful technical information on hand.

Interpretation, Comparison, and Synthesis of the Data

Before any comparison of the data was possible, the methods used by the various research institutions to express their experimental results had to be considered. The lack of standardization in the testing procedures and the variety of testing conditions made valid comparisons difficult; however, in compiling the information, care was taken to consider these variables whenever they were known.

The data were recorded on descriptive note cards, which considered all aspects of natural durability and preservation of tropical woods, as well as many extra details and peculiarities. Compilation of all these data would have created a huge and impractical document. For this reason, the information on the different aspects of natural durability and preservation was compared to reference classifications. This allowed the data to be matched to specific classes within this reference system, and provided a basis for comparison among different species.

Laboratory testing procedures for the assessment of wood resistance to fungal attack were similar from one source to another; therefore, comparisons with the reference classification system were based mostly on the quantitative definition of the classes. Field tests,on the other hand, differed substantially from country to country, and the experimental results were, in most cases, not directly comparable. However, the number of groups within the classifications that were derived from the field tests were fairly constant, and relatively accurate comparisons of the data were possible based on a qualitative definition of the groups. In selecting the reference classification system for describing the various aspects of natural durability, we retained those aspects that had been developed to describe wood durability under conditions prevailing in the countries of origin or under conditions that were thought to be the most severe.

Method of Presentation of the Data

Once the matching of the data with the reference classification was completed, the data were organized into tables. This type of presentation was chosen because it allows the reader to get a quick overall view of the contents. Each table describes a different wood. Columns 1–6 deal with the aspects of natural durability; whereas columns 7–12 deal with the properties of preservation of the wood. In addition, three columns have been reserved for supplementary information. The tables are arranged by alphabetical order of the scientific names of the woods. The following sections describe the characteristics outlined in the tables.

Scientific Name

Generic names were obtained from "Nomenclature générale des bois tropicaux" (ATIBT 1965). Sometimes, because of a close resemblance of the species, more than one generic name refers to the same wood. In these cases, the scientific name is followed by the designation spp. A complete list of scientific names is given at the end of the book.

Common Name

In addition to the scientific name, a common name is also given. The common name is a vulgarization that is suitable for use in several languages. The common names were derived from "Nomenclature générale des bois tropicaux" (ATIBT 1965) and are listed at the end of the book.

Natural Durability

The natural durability of wood can be defined as its degree of resistance to deterioration by the whole range of biological, chemical, mechanical, and physical wood-destroying agents. However, the natural durability of wood usually refers only to its degree of resistance to attack by biological agents. Natural durability is used in this latter sense throughout this book, and three different aspects of this characteristic have been considered, i.e. resistance to attacks by fungi, insects, and marine borers. An additional distinction has been made between the durability of freshly felled logs and green lumber on one hand, and conditioned wood in service on the other hand. This precision seemed advisable because of the significant damage caused to green logs and lumber in the tropics.

Green Logs and Lumber

These terms refer to freshly felled logs and green lumber having a moisture content (MC) greater than 30%.

Field Tests and Logging and Conversion Operations

Very few tests have been carried out to evaluate the natural resistance of green logs or lumber to fungal and insect attacks. Most of the data collected on this subject come from observations made on wood performance during logging operations (forest storage, flotation, transport by boats, etc.) and conversion operations (storage at the mill, air drying of sawn lumber or veneers, etc.).

Wood-Staining Fungi (Column 1)

Abnormal discolorations of freshly felled logs are mostly caused by wood-staining fungi. Some infestations chiefly affect the visual appearance of the wood; whereas, others can, in addition to discoloration, alter the physical and mechanical properties of the wood.

Discolorations affecting the visual appearance are produced by surface moulds and sap-staining fungi. The sap-staining fungi, so-called because their activity is almost exclusively confined to sapwood, are by far the most important of the two groups. They derive their nourishment primarily from food materials stored in the cell cavities of the sapwood, rather than from the components of the cell wall. In tropical Africa, the main sap stains are the blue, the brown, the red, and various combinations of these three stains.

Discolorations altering the physical and mechanical properties of the wood are apparently caused by wood-destroying fungi of the class Basidiomycetes. These stains are called incipient decay (early stage of decay), and are often seen on the log cross sections not long after felling. They usually appear as whitish spots or blackish flame-like streaks. These fungi attack the cell-wall constituents causing deterioration of the physical and mechanical properties of the wood. Stains associated with incipient decay are not always confined to the sapwood, but are likely to be more highly concentrated there.

Green lumber is also subject to discolorations by sap-staining fungi; however, incipient decay does not occur very frequently.

The literature does not seem to define any classification particularly suited to the assessment of the resistance of green logs and lumber to fungal attack. The information collected about resistance refers mainly to the notation of wood "susceptibility" to fungal deterioration. Therefore, five degrees of green wood susceptibility to attack by wood-staining fungi have been used:

(1) very low
(2) low
(3) moderate
(4) high
(5) very high

This reference classification is purely qualitative. In general, the assessment of the degree of susceptibility seems to be based, to a great extent, on the degree of rapidity of fungal attack after felling and on the rate of penetration of the hyphae into the wood.

Wood-Boring Insects (Attacking Wood Before it is Utilized) (Column 2)

Freshly felled logs and green lumber are often subject to attack by wood-boring insects, commonly called ambrosia beetles. The beetles get their name because they feed on the ambrosia fungus, which grows on the walls of their tunnels. These Coleoptera insects belong to the families Platypodidae and Scolytidae. They are common in Africa and cause extensive damage to logs and green lumber. They chiefly attack the sapwood, although sometimes they also penetrate the heartwood. Other wood-boring insects belonging to the families Lymexylidae and Ipididae can occasionally cause the same type of damage.

Other Coleoptera can attack wood before it is utilized, but the damage is almost exclusively restricted to the sapwood and rarely causes serious losses. Among these insects, the cerambycid beetles, usually known as longhorn beetles, are the most commonly observed in tropical Africa. Of less frequent occurrence are the brenthid and the bostrychid beetles, which are capable of resuming their attack in seasoned wood.

A classification describing five degrees of susceptibility of freshly felled logs to ambrosia beetle attack was used as the reference classification for the compilation of the data (Table 1). This classification was developed from a field test carried out in three locations in Nigeria (WATBRU 1960b). The assessment of the degree of insect attack was made by counting the number of holes on the surface of 0.61-m (2-ft) long logs, which were arranged as a Latin Square. The observations were made 6 weeks after felling.

The matching of the data with the reference classification was not always based on the quantitative definition of the classes because of the rather qualitative nature of some of the information. In many of the studies that were consulted, the assessment of the degree of susceptibility of green wood to insect attack was made on the grounds of the rapidity of the attack after felling, the rate and the depth of penetration of the insects into the logs, and the extent of the damage.

Wood in Service (Round or Converted)

These terms are used to refer to round and converted timbers, both sawn lumber and veneers, that have been conditioned for either indoor or outdoor use.

Laboratory Tests

Tests were carried out in the laboratory on small samples to assess the natural resistance of the woods to various types of fungal decay and insect attack. The artificial conditions (oxygen, temperature, and moisture) that were used were very favourable to the development of the attacks and accelerated the natural processes. The results give only a relative measure of natural durability, and are most reliable from the standpoint of immunity. However, if field tests are carried out in conjunction with the laboratory tests, some quantitative meaning can be given to the results.

Wood-Destroying Fungi (Column 3)

Most decay in wood is caused by wood-destroying fungi that break down the cellulose and lignin in wood. These fungi, which belong to the class Basidiomycetes, are often grouped into "wet-rot" and "dry-rot" types. This grouping is not satisfactory because these two types of decay are caused by fungi that can attack wood only when it is damp. In fact, at least four main types of wood decay can be defined.

(1) *Brown rot* — Wood attacked by brown-rot fungi splits both longitudinally and across the grain, forming large cubes. The most common species are: *Coniophora cerebella, Lenzites trabea, Lentinus xantha, Merulius lacrymans* (often associated with dry rot), *Poria vaillantii, Poria vaporaria,* and *Trametes trabea.*

(2) *White rot* — This is a fibrous form of decay. Wood attacked by white-rot fungi does not crumble into fine powder even if the attack is well advanced.

TABLE 1. Reference classification for compilation of data regarding degree of susceptibility of freshly felled logs to ambrosia beetle attack.

Degree of susceptibility	No. holes/ft²(0.09 m²)
Very low	< 1
Low	1–5
Moderate	5–10
High	10–60
Very high	> 60

White rot is mainly caused by the following fungi: *Polyporus versicolor*, *Polystictus versicolor*, and *Polystictus sanguineus*.

(3) *Wet rot* — The wood attacked by wet rot is definitely wet. Wet rot is found in parts of buildings where persistent water leakage or condensation occurs, and in wood used in contact with the ground or under persistently damp conditions. Wood damaged by wet rot usually exhibits cracking along the grain (Abankwak 1970; Building and Road Research Institute 1970b).

(4) *Soft rot* — This type of wood decay arises from extreme conditions of moisture. Timbers used in cooling towers, for example, are often attacked by soft rot. This term is generally applied to the surface decay of wood that is produced by wood-destroying microfungi of the classes Ascomycetes and Fungi imperfecti. The common species are *Chaetomium globosum* and *Chaetomium* spp. At times, these fungi may break down wood more rapidly than the Basidiomycetes if the conditions are favourable (Liese 1961).

The reference classification chosen for this aspect of natural durability was developed by Findlay (1938) in connection with laboratory tests on the resistance of wood to decay caused by brown- and white-rot fungi (Table 2). These tests were conducted on heartwood samples, measuring 10 × 2.5 × 1.5 cm (4 × 1 × 0.6 inches), exposed to infection for 4–8 months by placing them on cultures of the test fungi growing on malt agar in Kollé flasks. The test fungi were *Coniophora cerebella*, *Lenzites trabea*, *Merulius lacrymans*, *Polystictus sanguineus*, and *Polystictus versicolor*. The assessment of the degree of resistance was made by measuring the loss in oven-dry weight of the wood samples, expressed as a percentage of the initial oven-dry weight.

Some of the information on wood resistance to decay that was examined did not refer to any specific test although one could readily deduce the origin of the information. Therefore, some information has been recorded in this column despite its vague origin. In these cases, however, no reference was made to any specific type of decay.

Wood-Boring Insects (Attacking Wood in Service) (Column 4)

Recently or partly seasoned timbers are often attacked by beetles of the family Bostrychidae or of the family Lyctidae (powder-post beetles). These insects affect only the sapwood, and attack most of the larger-pored hardwood species. The degree of susceptibility to this type of insect attack is governed by the wood's starch content. Among these beetles, the bostrychids are the most detrimental, and their depredations, in stock piles at sawmills and timber yards and in manufactured articles, involve tremendous economic losses (Jones 1959a). Other types of insects confine their attacks to seasoned wood that has been in service for a number of years. In temperate areas in particular, the common furniture beetle and the house longhorn beetle can cause serious damage to furniture, paneling, and structural timbers; whereas, the deathwatch beetle confines its attack to old buildings or woodworks. In tropical and subtropical areas, the climatic conditions are favourable to the activity of insects that can, and do, attack wood under any service condition. These insects belong to the order Isoptera and form two groups, namely the dry-wood termites, which attack wood directly and maintain no contact with the ground, and the subterranean termites, which attack wood in contact with the ground. From the former group, the species *Cryptotermes havilandi* and *Cryptotermes dudleygi* have been commonly observed in West and East Africa,

TABLE 2. Reference classification used to assess the resistance of wood to decay caused by wood-destroying fungi.

Grades of wood resistance to decay caused by brown- and white-rot fungi	Average loss in oven-dry weight (%)
Very resistant	0
Resistant	0–5
Moderately resistant	5–10
Nonresistant	10–30
Perishable	> 30

respectively. These termites can destroy an entire house in less than 20 years (Building and Road Research Institute 1970a). From the latter group, the species *Microtermes* sp. and *Coptotermes sjöstedti* have frequently been found in Nigeria to attack wood in contact with the ground (Bampton et al. 1966). During a field test in Tanzania, the species *Amitermes messinae*, *Macrotermes bellicosus*, and *Odontotermes mediocris* were identified (Tanzania Forest Division 1969). The species *Reticulitermes flavipes* and *Reticulitermes lucifugus*, which are often mentioned in column 4 of the synoptic charts, are also subterranean termites.

There are at least two different laboratory methods for testing wood resistance to these insects. The assessment can be based on the success of survival and development of an insect colony placed in contact with the wood, or according to the degree of damage produced by an artifically maintained insect colony. These two methods would likely differ substantially according to the type of insect tested; accordingly, there is no common classification suited for the expression of the results acquired from these various tests. However, since the laboratory tests seem to be chiefly related to termites, this reference classification (Table 3) was based on a test of wood resistance to attack by the dry-wood termite *Cryptotermes havilandi* (Butterworth et al. 1966a, b). The test consisted of measuring the length of life of termite colonies put in contact with the test material. The laboratory colonies were established on 10 × 3.75 × 0.15 cm (4 × 1.5 × 0.06 inch) veneer strips cut from the heartwood and the sapwood of the test wood. The number of termites in the colony was counted daily for the first seven days, then every fourth day up to the thirty-first day, and thereafter weekly. In assessing the resistance of a wood, not only was the length of the colony life taken into account but so were the degree of development and any anomalous behaviour.

Only the two last grades of wood resistance have been changed from those used by Butterworth et al. (1966a, b) (Table 3). Besides describing the success of the termite colony, a potential degree of attack by a sustained colony of insects has been suggested. Its addition facilitated the matching of some data with the various groups of the reference classification because the nature of the information collected was not always suited for comparison with the reference classification for wood resistance to termite attack.

Some information regarding the resistance of wood to insect attack was included in this column, when it seemed appropriate, although its exact origin was doubtful.

Field Tests and Performance of Wood in Service

Field tests, or graveyard tests, consist of placing small wood specimens in the ground and determining the type and development of the alterations that occur. These tests generally reproduce the worst conditions for wood in service, i.e. wood used in contact with the ground and exposed to the weather. Tests carried out in sea or brackish waters have also been included in this category because the prevailing conditions of exposure reproduce fairly well the actual service conditions of timbers used in these waters.

The field tests determine the wood's resistance to deterioration by the whole range of destructive agents present on the test site. These tests predict with a fairly good degree of accuracy the useful life of woods, particularly less durable ones, exposed to similar or milder conditions.

One method that allows an even better assessment of the natural durability of the wood is observing the performance of wood in actual service conditions; however, this method is limited by the considerable length of time it requires.

TABLE 3. Reference classification used to assess resistance of wood in service to wood-boring insects.

Grades of wood resistance to termites and other insects	Success of termite colony after 200 days in contact with wood	Suggested degree of attack by sustained colony of insects after 6–12 months in contact with wood
Very resistant	None	Very low or none
Resistant	Low	Low
Moderately resistant	Moderate	Moderate
Nonresistant	High	High
Perishable	Very high	Very high

Fungi and/or Insects (Column 5)

Fungi and subterranean termites are the two main destructive agents that attack wood in contact with the ground. Although, in tropical Africa, termites are responsible for most of the damage caused to wood in service, wood-destroying fungi can also produce substantial damage, particularly in damp areas.

The reference classification chosen for this column is related to a field test carried out in Tanzania (Tanzania Forest Division 1969) (Table 4). Test specimens, 5 × 5 × 61 cm (2 × 2 × 24 inches), cut from heartwood, were placed vertically 1 foot into the ground and their average life spans were recorded. The specimens were subject to attack by both subterranean termites and wood-destroying fungi; however, the termites were the most destructive at all test sites.

The symbols chosen to designate the types of destructive agents were F – fungi and T – termites; their importance follows in left to right order in the column.

In this classification, the term "durable" has been retained in preference to the term "resistant," which was used in two of the previous reference classifications. Durable seems to be the proper term to use when describing the ability of wood to resist the overall range of destructive agents present in its environment. Furthermore, this technical term expresses a quantitative value that can only be assessed by field tests or by observing the performance of wood in service.

TABLE 4. Reference classification used to assess durability of wood in contact with the ground.

Grades of natural durability of wood in contact with ground	Average life span of specimens (*years*)
Very durable	> 10
Durable	5–10
Moderately durable	2–5
Nondurable	1–2
Perishable	< 1

Marine Borers (Column 6)

Wood used in sea or brackish waters is subject to attack by both mollusks and crustacea. Among the mollusks, the teredinids and the pholads are common in tropical waters. The teredinids, commonly called shipworms, are by far the most destructive of the two groups. The most common genera are *Teredo*, *Bankia*, *Lyrodus*, and *Nausitora*. The tunnels these animals make in the wood can be many centimetres in length and are usually up to one centimetre in diameter. The pholads, mainly the genus *Martesia*, also occasionally cause serious damage to timbers that are in service in tropical waters. Among the crustacea, the three genera *Limnoria*, *Sphaeroma*, and *Chelura*, commonly called gribbles, are responsible for most of the damage caused by this class of marine borers. Their attacks are generally confined to the surface of the wood; however, this superficial burrowing causes the surface to weaken, hastens erosion, and exposes fresh surfaces to further attacks.

The reference classification chosen for this column originated from a test carried out in the waters of Kilindini Harbor, at Mombasa, Kenya (McCoy-Hill 1958, 1964a,b,c) (Table 5). Test fenders, 30 × 30 cm (12 × 12 inches) in cross section, were installed in sea water infested by teredinids and pholads. Species of crustacea were also present at the site. The degree of attack by the marine borers was assessed and a serviceable life expectancy was estimated for the test timbers. Slight changes were made to the original classification. The terms of the last two grades were replaced by equivalent terms for the sake of simplicity and uniformity, and the grades that were originally arranged in pairs were considered separately.

The symbols chosen to designate the types of marine borers present in the test site were: B – *Bankia*; L – *Limnora*; M – *Martesia*; N – *Nausitora*; S – *Sphaeroma*; and T – *Teredo*. Their importance follows in left to right order in the column.

TABLE 5. Reference classification used to assess resistance of wood to marine borers in tropical waters.

Grades of wood resistance to marine borers	Degree of destruction of test woods after 1 year	Serviceable life expectancy (*years*)
Very resistant	None (0–5%)	8
Resistant	Low (5–10%)	5–8
Moderately resistant	Moderate (10–25%)	1.5–5
Nonresistant	High (25–75%)	0.5–1.5
Perishable	Very high (75–100%)	≤ 0.5

Conditions of Exposure that Require Preservative Treatment (Column 7)

Six conditions of exposure[1] that require a preservative treatment were considered.

Before the Wood is Utilized (Service Condition A[1])

In tropical areas, it is often necessary to protect logs against wood-staining fungi and wood-boring insects by means of temporary preservative treatments. In damp areas in particular, logs cannot be stored in the forest for more than a few hours or at the most a few days before they are attacked by these destructive agents.

Likewise, between the time of their conversion to the time of their final conditioning, sawn lumber and veneers may require preservative treatments to resist attacks by wood-staining fungi and wood-boring insects.

Service Condition A

Wood that is in permanent contact with the ground or is close to a persistent humidity source, for example: mining timbers; wood paving blocks; palisades; piling in fresh water; fencing posts; lock gates; railway sleepers; and telegraph and transmission poles.

Service Condition B

Wood that is not in contact with the ground but is subject to long periods of rehumidification, for example: greenhouses; heavy duty flooring in trucks and boxcars; and cooling towers.

Service Condition C

Wood that is not in contact with the ground and is subject to rehumidification by rain, for example: exterior joinery; wheelwright's work; and structural work.

Service Condition D

Wood that is not in contact with the ground and is not exposed to the weather, for example: interior joinery; furniture; and carving.

Service Condition E

Wood that is used in sea or brackish waters, for example: marine constructions; and harbour works.

Amenability to Impregnation by Preservatives (Column 8)

This characteristic is the ease or difficulty with which wood can be impregnated with a preservative. The main quantitative measure of this property is the depth of penetration of the preservative both along the wood grain (longitudinal penetration) and across the wood grain (lateral penetration). The amount of preservative absorbed per unit of volume is also usually recorded, but owing to the variation of preservative absorption with the dimensions of the treated pieces, this index is not as useful, particularly for nonpermeable woods.

The reference classification selected for compiling the data gathered on this characteristic was related to pressure impregnation tests made on heartwood specimens 5 × 5 × 110 cm (2 × 2 × 42 inches), impregnated with coal-tar creosote conforming to BS 144 by a standardized full-cell process consisting of: (1) initial vacuum of 50-cm mercury (20-inches mercury) for 15 minutes; (2) hydraulic pressure of 10 kg/cm^2 (140 psi) for 1 hour; (3) final vacuum of 50-cm mercury (20-inches mercury) for 15 minutes; and (4) a creosote temperature of 82 °C (180 °F).

To obtain specific information on how well woods can be impregnated when the preservatives are applied by the hot-and-cold open tank process, which is an alternative method of treatment when a pressure plant is unavailable, a second group of specimens is usually treated by a standardized form of this process. The specimens are immersed in creosote, conforming to BS 144, which is raised to a temperature of 82 °C in about one hour and maintained at this temperature for an additional hour. The creosote is allowed to cool overnight to about 20 °C and the specimens are then removed (Redding 1971) (Table 6).

[1] Service conditions A–E defined by Fougerousse 1961.

TABLE 6. Reference classification used to assess the amenability of wood to impregnation by preservatives, based on the depth of penetration of the preservative.

Wood amenability to impregnation	Depth of penetration
Permeable	Penetrated completely without difficulty under pressure. Usually heavily impregnated by the hot-and-cold open tank process.
Moderately resistant	Impregnated fairly easily. Lateral penetration usually 6–18 mm (0.25–0.75 inch) in about 2–3 h under pressure. A large proportion of the vessels are penetrated.
Resistant	Impregnation under pressure is difficult and requires a long period of treatment. Lateral penetration often impossible for more than about 3–6 mm (0.12–0.25 inch).
Extremely resistant	Very small amount of preservative absorbed even after a long period of pressure treatment. Lateral penetration is often less than 0.5 mm (0.02 inch) and longitudinal penetration is also very limited.

Preservative Treatments

Columns 9–12 in the synoptic tables refer o preservative treatments carried out on the woods. This information comes mostly from field and service tests. Laboratory tests on the effectiveness of preservative treatments for tropical woods have apparently been limited in extent.

In addition, very little information is available on the effectiveness of preservative treatments when applied to African woods used under local conditions of exposure. It is likely that a substantial amount of information is contained in unpublished reports that are in the hands of private individuals. However, it remains to be seen if tests have been conducted on a wide range of species using many different preservative treatments under various conditions of exposure.

Methods of Impregnation (Column 10)

Four groups of processes for the application of preservatives were considered.

(1) UP Processes

These processes refer to impregnation "under pressure."

UP1 – Bethell process (full-cell process)
UP2 – Rueping process (empty-cell process)
UP3 – Lowry process (empty-cell process)

(2) NP Processes

This group refers to "non-pressure" processes.

NP1 – Brushing
NP2 – Spraying
NP3 – Hot-and-cold open tank process
NP4 – Steeping and cold soaking
NP5 – Dipping

(3) Di Processes

These processes refer to the application of water-soluble preservatives by "diffusion."

Di1 – Barrel method
Di2 – Dip-diffusion process
Di3 – Double diffusion
Di4 – "Osmose" process
Di5 – Preservative bandages
Di6 – Preservatives in bored holes

(4) SD Processes

This group applies to "sap-displacement" processes that are based on the displacement, at least partially, of the sap in the sapwood of freshly felled logs or green timbers by water-borne preservatives.

SD1 – Boucherie process
SD2 – Gewecke process
SD3 – Lebacq process

When a preservative treatment is required, the choice of the method of impregnation is mostly based on the conditions of exposure of the wood either before it is utilized or when it is put in use. Six categories of exposure have already been described (column 7). Before the wood is utilized, the freshly felled logs and green lumber can be temporarily protected with a preservative applied by the spraying or brushing methods. For uses under service conditions A and B, impregnation under pressure, the hot-and-cold open tank process, and the sap-displacement method are usually recommended. For wood used under service condition C, the pressure processes, the hot-and-cold open tank process, and the steeping method are recommended for wood not painted after treatment; whereas, the diffusion methods are most suitable for wood painted after treatment. For wood used under service condition D, the nonpressure processes such as brushing, dipping, steeping, and in particular, the dip-diffusion method, are usually satisfactory. The only treatment recommended for wood used under service condition E is complete impregnation under pressure (BWPA/TRADA: Fougerousse 1966a).

Preservative (Column 11)

Wood preservatives can be divided into three main groups.

(1) TO Preservatives

This group consists of the "tar oil" type preservatives.

TO1 – Coal-tar creosote
TO2 – Low temperature coal-tar creosote
TO3 – Liquid creosote
TO4 – Anthracene oils
TO5 – Creosote-coal-tar solutions
TO6 – Petroleum oils
TO7 – Wood-tar creosote
TO8 – Creosote-petroleum solutions

(2) OS Preservatives

This group consists of the "organic solvent" type preservatives. They consist of various chemicals dissolved in an oil solvent, which is usually light and volatile although it may be heavy and nonvolatile.

OS1 – Pentachlorophenol
OS2 – Copper and zinc naphthenates
OS3 – Chloronated naphthalenes
OS4 – Lindane (HCH)
OS5 – DDT
OS6 – Benzene hexachloride (BHC)
OS7 – Copper or zinc pentachlorophenates
OS8 – Gammexane
OS9 – Dieldrin
OS10 – Xylophene

(3) WB Preservatives

This group consists of the "water-borne" preservatives. These preservatives consist of certain salts of copper, zinc, mercury, sodium, potassium, or chromium dissolved in water to give a toxic solution.

(a) Simple-Salt Preservatives

WBa1 – Copper sulphate
WBa2 – Zinc sulphate
WBa3 – Arsenic salt
WBa4 – Chromium salt
WBa5 – Nickel salt
WBa6 – Sodium pentachlorophenate
WBa7 – Mercuric chloride
WBa8 – Zinc chloride
WBa9 – Sodium chloride
WBa10 – Sodium fluoride
WBa11 – Sodium arsenite

(b) Mixed-Salt Preservatives

WBb1 – Celcure (copper/chromium
WBb2 – Wolman salts (fluor/chromium/arsenic/phenol)
WBb3 – Boliden salts (copper/chromium/zinc/arsenic)
WBb4 – Greensalt (copper/chromium/arsenic)
WBb5 – Chemonite (arsenic/copper/ammonia)
WBb6 – Chromated zinc chloride
WBb7 – Fluor/copper/arsenic/boron

(c) Boron Compounds

WBc1 – Boric acid – borax
WBc2 – Boric acid – sodium fluoride

The protection obtained from a preservative treatment is determined by the effectiveness of the preservative as well as the method of its application. The choice of a suitable preservative is mainly based on the conditions to which the wood is to be exposed. For example, before the wood is utilized, preservatives made of chemicals dissolved in oils forming emulsions with water, preservatives made of chemicals dissolved in organic solvents, and nonleachable salt preservatives usually give satisfactory protection. For wood used under service conditions A and B, tar-oil preservatives, organic-solvent type preservatives, and nonleachable water-borne type preservatives are usually recommended. Under service condition C, virtually all types of preservatives are recommended but tar-oil type preservatives and preservatives dissolved in a nonvolatile organic solvent are excluded if the wood is to be painted after treatment, in which case, a water-borne type preservative is most suitable. Under the two remaining service conditions, the tar-oil type preservatives are virtually excluded for

wood put into use under condition D; whereas, these preservatives, when used alone or as a double treatment with water soluble salts, are the most suitable for timbers employed under service condition E (BWPA/TRADA; Fougerousse 1966a).

Effectiveness of Preservative Treatments (Column 12)

The effectiveness of a preservative treatment depends on the method of impregnation and the properties of the preservative itself, particularly its permanence in the treated material and its degree of toxicity toward the wood-destroying agents. This information was collected in great part from field tests. Although field tests cannot reproduce actual service conditions and prove the true value of a preservative treatment, the results acquired from these tests can determine the serviceable life expectancy of the treated woods with a fairly good degree of accuracy.

Supplementary Information

Remarks

These additional notes refer to peculiarities of the wood, which may be of some potential interest, or to explanations of the contents of the charts.

Uses

The most common uses for the woods, and other possible uses for which they are most suitable, have been given in the tables as additional information because the properties of durability and preservation of tropical woods determine in great part their use in tropical countries. The common uses are those known to the timber trade and the timber-using industries, either in the countries of origin or in the importing countries. These uses may reflect the good qualities of natural durability of the species or its good amenability to preservative treatments. The possible uses refer to the suitability of the wood to various other purposes that are recommended mostly as a result of the tests carried out to determine the properties of the wood.

Most of the uses have been classified according to the service conditions described before. An additional class has been included for miscellaneous uses. The uses that were apparently the most important for the given species were cited first in the column. The references for this type of information were not given because of a lack of space. The uses retained in this study and their corresponding symbols are listed below.

(1) Uses Under Service Condition A

A1 – Mining timbers
A2 – Palisades
A3 – Paving blocks
A4 – Fence posts
A5 – Poles
  A5a – Telegraph and transmission poles
  A5b – Foundation pilings for habitations
A6 – Mudsills
A7 – Hydraulic works
  A7a – Conduits and flumes
  A7b – Locks
  A7c – Fresh-water piling
A8 – Railway sleepers

(2) Uses Under Service Condition B

B1 – Concrete forms
B2 – Boats and canoes
B3 – Packaging
B4 – Heavy-duty flooring in trucks and boxcars
B5 – Door framing
B6 – Paddles
B7 – Bridge and ship deckings
B8 – Greenhouses
B9 – Cooperage
B10 – Cooling towers

(3) Uses Under Service Condition C

C1 – Motor vehicle bodywork
  C1a – Cars
  C1b – Trucks
C2 – Wheelwrights' work
  C2a – Trucks
  C2b – Boxcars
C3 – Light structural work
  C3a – Farm buildings
  C3b – Garages
  C3c – Habitations
C4 – Heavy structural work
  C4a – Public buildings
  C4b – Bridges
  C4c – Miscellaneous structural works
C5 – Gun stocks
C6 – Aircraft propellers
C7 – Agricultural implements
C8 – Tool handles
C9 – Exterior joinery

(4) Uses Under Service Condition D

D1 – Matches
D2 – Furniture
D3 – Sports goods

D4 – Cigarette and cigar boxes
D5 – Brush backs
D6 – Walking sticks
D7 – Coffins
D8 – Pencils
D9 – Interior decorations and fittings
  D9a – Residential and public buildings
  D9b – Shops
  D9c – Ships
  D9d – Railway coaches
D10 – Counter tops
D11 – Cabinet work
D12 – Wood engraving
D13 – Musical instruments
  D13a – String instruments
  D13b – Wind instruments
D14 – Insulation
D15 – Interior joinery
  D15a – General joinery
  D15b – High-class joinery
  D15c – Carpentry
D16 – Pattern making
D17 – Mouldings
D18 – Fancy goods
D19 – Flooring
  D19a – Residential and public buildings
  D19b – Industry
  D19c – Laboratory
D20 – Interior doors
D21 – Carving
D22 – Shelving
D23 – Turnery
D24 – Wooden utensils

(5) Uses Under Service Condition E

E1 – Naval construction
E2 – Fishnet floats and ostreicultural works
E3 – Harbour works (piling, wharves, jetty docking, etc.)

(6) Miscellaneous Uses (F)

F1 – Charcoal
F2 – Plywood
F3 – Acid vats
F4 – Fibreboards and particle boards
F5 – Pulp
F6 – Decorative veneers
F7 – Battery separators

References

The numbers in this section refer to the publications, in the bibliographic list, that were consulted during the compilation of the data. Most of these references are found in the columns of the tables where they indicate the sources of specific information. The other references are related to information given under "Uses."

One Hundred
Tropical African Woods

Afzelia spp. DOUSSIÉ

NATURAL DURABILITY

GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
susc. of sap. to disc.: low to mod. (151)	susc. of sap. of logs to bostr. att.: low (112, 209) susc. of logs to amb. bee. att.: mod. to ve. high (243)	br. & wh. rots: heart. ve. res. (18, 87, 154, 209), w. ve. res. (56, 86, 99, 151), w. res. (57, 58)	w. ve. res. to term. (56, 58, 99, 234) w. res. to term. (47, 57, 86, 87, 112, 151, 190, 214) heart res. to term. *C. havil.* (53) w. mod. res. to term. *R. lucf.* (202), term. *R. flav.* (201) sap. mod. res. to bostr. (12, 18), lyct. (18, 145, 223)	heart. ve. dur. (F) (37, 50, 89, 190) heart. ve. dur. (T + F) (218, 228, 229, 246) w. ve. dur. (27, 45, 103, 112, 138, 214, 234) heart. dur. (T + F) (22, 41, 123, 227) w. dur. (110, 205, 248)	w. res. to ve. res. (T + M + L) (111, 168, 169) w. res. (T) (41, 246) w. mod. res. (T) (115, 154) w. n. res. (T) (112, 173, 234) w. peris. (T + B) (113)	serv. cond. E (99)	UP p. & TO pres.: heart. extr. res. (18, 41, 112, 154, 186, 214), sap. mod. res. (18, 112, 214) UP p.: w. res. (56, 87, 99) NP3 p.: heart. extr. res. (154, 186)

PRESERVATIVE TREATMENTS

EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)
A'			
A	Sp. NP3; con. (246)	TO1, WBa7, & WBa11 pres. (246)	res. to term. ≥ 43 ms, ≥ 91ms, ≤ 40 ms, & ≤ 40 ms for con. (246)
B			
C			
D			
E			

SUPPLEMENTARY INFORMATION

REMARKS	USES	REFERENCES
	common: Africa: A7, A8, C3c, C9 D9, D11, D15, D23 E1 other countries: F3, D15b, C4, C9, A7, B2, C7, D11, D19, E1, F5, F7	12, 18, 22, 27, 32, 37, 41, 45, 49, 50, 53, 56, 57, 58, 86, 87, 89, 99, 101, 103, 110, 111, 112, 113, 115, 123, 138, 145, 151, 154, 168, 169, 173, 186, 190, 197, 201, 202, 205, 209, 214, 218, 223, 225, 227, 228, 229, 234, 243, 246, 248

Albizzia spp. — MUSASE

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of logs to amb. bee. att.: ve. high (140, 141, 236), mod. to high (69, 224, 238), low to mod. (88, 92, 93)	br. & wh. rots: heart. res. to ve. res. (193, 209), heart. res. (93), heart. mod. res. (92) heart. ve. res. (151) w. mod. res. (57) sap. n. res. to mod. res. to bostr. & lyct. (18, 57, 88, 145, 151, 205, 209, 224)	heart. ve. res. to term. *C. havil.* (49, 53) sap. res. to term. *C. havil.* (53) w. res. to term. (41, 151) w. mod. res. to term. (92, 209)	heart. ve. dur. (F) (88, 89) heart. ve. dur. (50, 234) heart. dur. (T + F), (22, 41, 123, 218) w. mod. dur. to ve. dur. (153) heart. mod. dur. (T + F) (246) w. n. dur. (T) (92)		serv. cond. A & E for heart. (57) serv. cond. A, B, C, D, & E for sap. (57)	UP p. & TO pres.: heart. extr. res. (18, 41, 42, 88, 186, 225), sap. perm. (18, 88) UP p.: heart. extr. res. (151, 209), w. res. (57) NP3 p. & TO pres.: heart. extr. res. (42, 186)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: C3, D2, D15 other countries: D15, D2, C4, D19 possible: A1, A8, C1, C2, C3, C4, C9, D9, D11, D12, D15, D16, D21	18, 22, 41, 42, 45, 49, 50, 53, 57, 69, 88, 89, 92, 93, 123, 140, 141, 145, 151, 153, 186, 193, 205, 209, 218, 224, 225, 234, 236, 238, 246, 250
A	Sp. NP3; con. (246)	TO1, WBa7, & WBa11 pres. (246)	res. to term. ≥ 91 ms, ≤ 85 ms, ≤ 26 ms, & ≤ 26 ms for con. (246)			
B						
C						
D						
E						

Alstonia spp. — EMIEN

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	(7)	(8)
susc. of logs to bl. st. & inc. dec.: high to ve. high: (18, 56)	susc. of logs to amb. bee. att.: mod. to high (18, 75, 86, 88, 151, 214), ve. low (243)	br. & wh. rots: heart. n. res. (94), heart. peris. (18, 76, 92, 209) w. n. res. (75, 151) w. peris. (56, 86, 99)	w. n. res. to term.: (86, 88, 92, 99, 151, 214) sap. n. res. to term. *C. havil.*: (53) sap. n. res. to mod. res. to bostr. & lyct. (18, 86, 88, 92, 101, 110, 145, 151, 205, 214) heart. n. res. to lyct.: (99)	heart. n. dur. (T + F) (229) heart. n. dur. (F) (50) w. n. dur. (T) (92) w. n. dur. (38, 45, 103, 234) heart. peris. (F) (37, 88, 89) w. peris. (27, 153, 214)	w. n. res. to mar. bor. (92)	treat. of logs aft. fel. (18) serv. cond. A, B, C, D, & E (75, 92, 99, 101, 103, 151)	UP p.: w. perm. (75, 92, 99, 103, 151, 205, 209) Note 1 NP3 p. & TO pres.: heart. & sap. perm. (186, 214) NP4 p. & OS pres. 24 hrs: w. perm. (228) Di p. & WBc pres.: satisfactory aft. 1-4 weeks diff. (105)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'	Sp. NP2; con. (69)	OS4 & WBa6 + bor. 4% pres. (69)	no att. of treat. sp. aft. 1 yr; con. att. by fun. & ins. (69)	Note 1: use of Rueping p. to av. exces. abs. (75, 92, 214) Note 2: spr. of piles with OS4 pres. during diff. to protect. agst. w.-b. ins. (105)	common: Africa: B3, D1, D2, D21, D24, F2 other countries: B3, D15, D16, F5 possible: C3, D2, D19, F5, F7	18, 27, 37, 38, 45, 50, 53, 56, 69, 75, 76, 86, 88, 89, 92, 94, 99, 101, 103, 105, 110, 138, 145, 151, 153, 166, 186, 205, 209, 214, 225, 228, 229, 230, 234, 243
A	Sp. NP4, 12 hrs (230) lumb. treat. by NP4 p. 12 hrs; con. (230)	OS5 pres. + oil (230) OS5 pres. + oil (230)	aft. 17 ms, 9/20 destr. by dec. (230) aft. 13 ms, treat. lumb. 100% sound & con. destr. (230)			
B						
C						
D	green lumb. treat. by Di2 p. (105)	WBc pres. (105)	aft. 1-4 weeks diff., protect. eff. through. (105), Note 2			
E						

Amblygonocarpus andongenesis Exell & Torre — BANGA-WANGA

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
		w. ve. res. (57)		heart. ve. dur. (T + F) (41, 218, 246) w. dur. to ve. dur. (T + F) (123)	w. mod. res. (L + T) (197)		UP p. & TO pres.: heart. extr. res. (41, 42) NP3 p.: heart. extr. res. (41)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: A8, D19	41, 42, 57, 123, 197, 218, 246
A						
B						
C						
D						
E						

Androstachys johnsonii Prain — MECRUSSÉ

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
		w. ve. res. (57)	w. res. to term. (57, 205) sap. n. res. to mod. res. to bostr. & lyct. (12) heart. res. to ve. res. to bostr. & lyct. (12)	w. ve. dur. (205)	w. mod. res. (L + T) (111, 197)		

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'					common: Africa: A8, D19 other countries: A3, A4, A5a, A8, C4a, E3 possible: C9, D15	12, 57, 111, 197, 205
A						
B						
C						
D						
E						

Aningeria spp. — MUKALI

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
			w. peris. to n. res. to term. bostr. & lyct. (214)	heart. peris. (T + F) (196, 218, 227) w. peris. to n. dur. (110, 248)		serv. cond. A, B, C, D, & E (196)	UP p. & TO pres.: heart. & sap. perm. (42, 214) NP3 p. & TO pres.: heart. & sap. perm. (42, 214)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'					common: D15a, D15c, D2, D9, C2a, B10, D5	42, 110, 145, 196, 214, 218, 227, 229, 246, 248
A						
B						
C						
D						
E						

Anopyxis klaineana Engl. — BODIOA

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
		w. n. res. (57, 96, 99, 151)	w. res. to ve. res. to term. (57, 101) w. mod. res. to term. (99) heart. n. res. to term. *C. havil.* (49, 56) w. mod. res. to lyct. (57, 101)	w. mod. dur. (100) w. n. dur. (50) heart. peris. to n. dur. (T + F) (22)		during log. oper. (57) serv. cond. A, B, C, & E (99)	UP p. & TO pres.: heart. mod. res. (186) w. perm. to mod. res. (57, 99, 100) NP3 p. & TO pres.: heart. mod. res. (186)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: A8 (W.T.), C3 possible: C9, (W.T.), D15	22, 45, 49, 50, 53, 56, 57, 96, 99, 100, 101, 151, 186
A						
B						
C						
D						
E						

Antiaris spp. — AKO

NATURAL DURABILITY

GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	(7)	(8)
susc. of logs to disc., in partic., to bl. st.: high to ve. high (41, 190), low to mod. (56, 57, 138, 151, 234) susc. of logs to ins. dec.: low to mod. (56)	susc. of logs to amb. bee. att.: ve. high (140, 141, 192, 236, 238), high to ve. high (34, 41, 69, 151, 180, 214), low to mod. (56, 88, 92, 166, 190, 243) susc. of logs to ceramb. att.: low to mod. (88, 151, 214)	br. & wh. rots: heart. peris. (18, 74, 92, 94), w. peris. (56, 57, 99)	heart. n. res. to term. *C. havil*. (49) w. peris. to n. res. to term. (88, 92, 99, 151, 214) w. n. res. to bostr. & lyct. (37, 57, 65, 98, 99, 103, 110) sap. res. to bostr. & lyct. (18, 56, 214)	w. n. dur. (T) (183) heart. peris. (F) (37, 50, 88, 89, 190) heart. peris. (T + F) (41, 218) w. peris. (T) (92) w. peris. to n. dur. (27, 45, 110)	w. peris. to n. res. (92)	treat. of green logs & lumb. neces. (18, 56) serv. cond. A, B,C, D, & E (92, 99, 103) serv. cond. D agst. bostr. & lyct.: (65, 98, 105)	UP p.: heart. mod. res. (41), heart. perm. (18, 88, 186, 190, 214, 225, 234), w. perm. (57, 99, 103, 153) NP p.: heart. perm. (186, 225)

PRESERVATIVE TREATMENTS

EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)
A[1]	green lumb. treat. by NP2 p. (69) unbark. logs treat. by NP2 p. (84)	OS4 pres. & powder cons. of WBa6 + bor. (69); OS5 & OS6 pres. + (oil) (84)	protect. 1 yr. agst. ins. (69); protect. 8 weeks agst. amb. bee. by OS6 pres. & almost null by OS5 (84)
A	Sp. UP1, UP2, & UP3; con. (100)	WBb2, TO1 pres. (100)	life in gr. cont. in damp areas 1.2 yrs, 10 yrs, 2.5 yrs, & 1 yr for con. (100)
B			
C			
D	ply. treat. by NP2 p. (65) green bds. 27 & 54 mm thick treat. by Di2 p. & 1-3 weeks diff. (155)	WBcl pres. (65) WBcl pres. (155)	protect. agst. lyct. through. (65) full protect. agst. fun. & ins. for 27 mm bds. (155)
E			

SUPPLEMENTARY INFORMATION

REMARKS	USES	REFERENCES
	common: Africa: B2, B3, B5, D1, D24 other countries: B3, F2, F7, D2 possible: C1, C2, D11, F6	18, 27, 34, 35, 37, 41, 45, 49, 50, 56, 57, 65, 69, 74, 84, 88, 89, 92, 94, 98, 99, 100, 101, 103, 105, 110, 138, 140, 141, 151, 153, 155, 166, 180, 183, 186, 190, 192, 214, 218, 225, 234, 236, 238, 243, 248

Antrocaryon spp. — ONZABILI

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	(7)	(8)
	susc. of logs to amb. bee. att.: low to mod. (166)	br. & wh. rots: heart. peris. (18, 92) w. n. res. (99, 101, 151)	w. n. res. to term.: (57, 92, 99) w. peris. to n. res. to lyct.: (57, 92, 99, 110) w. n. res. to bostr. & lyct. (16, 101, 103)	w. n. dur. (45, 103, 110) w. n. dur. (T) (92) w. peris. (166)	w. peris. to n. res. to mar. bor. (92)	serv. cond. A, B, C, D, & E (99, 101, 103, 110)	UP p.: w. mod. res. (99, 103), w. perm. (18) Di2 p. & WBc pres.: aft. 2-4 weeks diff., conc. of pres. (0.4% bor. ac.) in bds. 27 to 54 mm thick larg. suff. through. the w. (105)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]				Note 1: to be treat. with pres. beforehand, for all these uses	common: C8, D2 possible: B3, D11, D15, D17, F2, F5, F7 Note 1	16, 18, 45, 57, 92, 99, 101, 103, 105, 110, 151, 166
A						
B						
C						
D	bds. 27 to 54 mm Di2 p. (105) bds. NP2 p. (105)	WBc pres. (105) OS4 pres. + water (105)	protect. eff. through. the w. agst. fun. & ins. aft. 2-4 weeks diff. (105); protect. agst. w-b. ins. (105)			
E						

Aucoumea klaineana Pierre — OKOUMÉ

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of logs to bostr. att.: low to mod. (56) susc. of logs to amb. bee. att.: mod. (223)	w. mod. res. (56, 99) w. n. res. (16, 57, 190)	w. res. to term. *R. flav.* (201) w. n. res. to term. (57, 99, 103) sap. n. res. to mod. res.: lyct. (57, 145, 223), anob. (45) heart. res. to ve. res. to lyct. (56, 58, 99)	w. mod. dur. (103) heart. n. dur. (F) (89, 138) w. n. dur. (205, 223)	w. peris. (57)	serv. cond. A, B, C, & E (99) serv. cond. D in areas fav. to term. (103)	UP p.: w. res. (103), w. mod. res. (58, 99)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: B2, D15 other countries: F2, F3, D15, D2, B2, D11, D22 possible: B3, C3, F7	16, 32, 45, 56, 57, 58, 89, 99, 100, 101, 103, 138, 145, 190, 201, 205, 223
A	Sp. UP1, UP2, & NP3;con. (100)	WBb2, TO1, & TO1 pres. (100)	life in gr. cont. in damp areas 1-3 yrs, 3-5 yrs, 1-5 yrs, & < 1 yr for con. (100)			
B						
C						
D						
E						

Autranella congolensis A. Chev. MUKULUNGU

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of logs to amb. bee. att.: low to mod. (56, 93), ve. low (58)	br. & wh. rots: heart. res. to ve. res. (93, 94), w. ve. res. (57, 58) w. res. (86, 101)	w. ve. res. to term. (57, 58) w. res. to term. (56, 94, 101) w. mod. res. to term. (86, 93) heart. res. to lyct. (56, 86) sap. n. res. to mod. res. to lyct. (86)	heart. dur. to ve. dur. (56, 110) heart. dur. (F) (138)	w. mod. res. to res. (T + N) (113) w. mod. res. (T + L) (111, 112) w. n. res. to mod. res. (L + T) (197)		UP p. & TO pres.: heart. mod. res. (86)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: A8 other countries: B7, C2c, C4, D11, D15, D19, D23, E3, F3 possible: A1, A6, A7, B5, B7, C4, D9, F2, F7	56, 57, 58, 86, 93, 94, 101, 110, 111, 112, 113, 138, 197
A						
B						
C						
D						
E						

Baikiaea plurijuga Harms — UMGUSI

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of logs to ceramb. att.: mod. to high: (57, 87, 88, 210) susc. of logs to amb. bee. att.: ve. high: (214)	br. & wh. rots: heart. res. to ve. res. (76, 87, 210) w. ve. res. (57)	w. ve. res. to term. (83) w. res. to term. (18, 57, 87, 88, 190) sap. n. res. to mod. res. to bostr. & lyct. (12, 57, 87, 88, 210)	heart. ve. dur. (F) (89, 190, 191) heart. ve. dur. (T + F) (246) heart. dur. (F) (88) w. dur. to ve. dur. (205)	w. mod. res. (L + T) (111, 197)		UP p. & TO pres.: heart. extr. res. (88, 190), sap. mod. res. (88, 190)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: A8 (W.T.), C1, C2c, D2, A1 other countries: D19, C9 possible: D2, D15, D19, F5	12, 18, 57, 76, 83, 87, 88, 89, 111, 190, 191, 197, 205, 210, 214, 246
A						
B						
C						
D						
E						

Baillonella toxisperma Pierre — MOABI

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of sap. of logs to amb. bee. att.: low to mod. (56, 86)	w. ve. res. (99) w. res. (56, 86, 101)	w. ve. res. to term. (99) w. res. to term. (56, 58, 86) heart. res. to ve. res. to lyct. (99) w. res. to bostr. & lyct. (56, 58, 86, 101)	w. ve. dur. (103) w. dur. (110)	w. ve. res. (L + T) (111) w. mod. res. (T + B + N) (111)		UP p.: w. extr. res. (99) NP3 p.: w. res. (56, 86)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: D11, D2, D15, D19, F7 possible: C9, D15, D23, A6, C3, D9, D21	56, 58, 86, 99, 101, 103, 110, 111, 113, 138
A						
B						
C						
D						
E						

Berlinia spp. — EBIARA

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of logs to amb. bee. att.: mod. to high (56, 86, 88, 151), ve. high (243)	br. & wh. rots: heart. mod. res. (37, 210) w. mod. res. (57, 86, 99, 151) sap. peris. (190)	w. res. to term. (57) w. mod. res. to term. (86, 88, 92, 99, 151, 190) heart. n. res. to term. *C. havil.* (49, 53) sap. n. res. to lyct. (57, 86, 88, 92, 151, 190, 210, 245) heart. res. to ve. res. to lyct. (57, 99)	heart. dur. (110, 234) heart. mod. dur. (F) (37, 88) w. mod. dur. (103, 153) w. mod. dur. (T) (92) heart. n. dur. (F) (89)	w. peris. to n. res. (92)	serv. cond. A, B, E (99) serv. cond. A, B, C, & E in areas fav. to dry-w. term. (103)	UP p. & TO pres.: heart. res. (86, 88, 186, 190), sap. perm. (86, 88, 190) UP p.: heart. res. (151, 153), sap. perm. (99, 151, 210) NP3 p. & TO pres.: heart. res. (186), sap. perm. (186)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: C3, C4a, D15c other countries: C3, D11, D15, C2c, C4, D10, C2a, F7 possible: D15, C9, A8, B4, C3, C7, D9d, F5, F7	37, 49, 52, 53, 56, 57, 86, 88, 89, 92, 99, 103, 110, 151, 153, 186, 190, 210, 234, 243, 245
A						
B						
C						
D						
E						

Bombax spp. — KAPOKIER

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
susc. of logs to disc., in partic., to bl. st.: high to ve. high (92)	susc. of logs to ins. att.: ve. low to low (92, 166)	br. & wh. rots: heart. peris. (92)	w. n. res. to term.: (92) w. n. res. to mod. res. to lyct. & bostr. (92, 166)	heart. peris. (T + F) (41)	w. n. res. to mar. bor. (92)		UP p. & TO pres.: heart. extr. res. (41)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'					common: Africa: B2, D2, D18, D24 other countries: B3, D2, D17, D18, F5 possible: B3, D15a, F2, F5	41, 92, 151, 166, 205
A						
B						
C						
D						
E						

Brachylaena hutchinsii Hutch. — MUHUHU

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
			heart. res. to term. (190)	heart. ve. dur. (F) (89, 190) w. ve. dur. (T +F) (41, 218, 246) w. ve. dur. (248)	w. res. to ve. res. (T + M + L + S) (16, 41, 111, 168, 169) w. res. to mar. bor. (190) w. mod. res. (111, 197)		UP p. & TO pres.: heart. extr. res. (42, 86, 186, 190) NP3 p. & TO pres.: heart. extr. res. (42, 186)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'					common: Africa: A4, A5b, A8, B5, C4a, D2, D21, D23 other countries: D19a, D19b	16, 41, 42, 86, 89, 111, 168, 169, 186, 190, 197, 218, 227, 246, 248
A	Sp. NP3 (246)	TO1, WBa7, & WBa11 (246)	res. to term. ≥ 37 ms, ≥ 37 ms, & ≥ 37 ms (246)			
B						
C						
D						
E						

Brachystegia spp. NAGA

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of logs to amb. bee. att.: low to mod. (56, 151)	heart. mod. res. (56, 134) w. n. res. to mod. res. (57, 86, 151) sap. n. res. (56, 134)	w. res. to term. (151) w. n. res. to term. (57) heart. res. to bostr. & lyct. (86, 134) sap. n. res. to bostr. & lyct. (56, 86, 134, 151)	heart. mod. dur. (F) (37, 190) w. dur. (110) w. mod. dur. (153) w. n. dur. (234)	w. res. (L + T) (249) w. n. res. to mod. res. (L + T) (197)	serv. cond. A, B, C, D, & E (56, 57)	UP p. & TO pres.: heart. extr. res. (88, 186, 190, 234), sap. perm. (86, 88, 186, 234) UP p.: heart. extr. res. (57, 151, 153) NP3 p. & TO pres.: heart. extr. res. (186), sap. perm. (186)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'					common: D7, C3, D2, D9, D19, F2, F7 possible: B4, C1, D2, D15, F7	37, 46, 56, 57, 86, 88, 110, 134, 138, 151, 153, 172, 186, 190, 197, 234, 245, 249
A						
B						
C						
D						
E						

Brachystegia spiciformis Benth. — MESSASSA

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of sap. of logs to amb. bee. att.: mod. to high (205)		sap. n. res. to bostr. & lyct. (205)	heart. mod. dur. (T + F) (123, 218, 246) heart. mod. dur. (205) heart. n. dur. (T + F) (41, 248) heart. n. dur. (F) (88) sap. peris. (205)	w. n. res. to mod. res. (T + M + L) (169) w. n. res. (T + M + L + S) (168) w. peris. (47)		UP p. & TO pres.: heart. extr. res. (41, 42, 88, 186), sap. perm. (42, 88, 186) NP3 p. & TO pres.: heart. extr. res. (42, 186), sap. perm. (186), sap. mod. res. (42)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: A8, (W.T.), C2, F1 other countries: A1, A8, C3a, C8, D2, D11, D19 possible: A8, C1a, C2, C3, D2, D15, F2	41, 42, 47, 88, 123, 168, 169, 186, 205, 218, 246, 248
A	rail. sl. impr. by UP p. aft. incis. (41)	TO1 pres. (41)	pen. small but suff. to protect. from dec.; life of sl., increased 100% (41)			
B						
C						
D						
E						

Burkea africana Hook. — MUKARATI

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of logs to amb. bee. att.: mod. to high (223)		w. res. to ve. res. to term. (41) w. n. res. to term. (138) heart. ve. res. to lyct. (12) sap. n. res. to mod. res. to lyct. (12, 223)	heart. ve. dur. (T + F) (41, 218) heart. dur. (F) (138) heart. dur. (205, 206)	w. mod. res. to res. (T + M + L + S) (111, 169) w. mod. res. (L + T) (111, 197)		UP p. & TO pres.: heart. extr. res. (41, 42) NP3 p. & TO pres.: heart. extr. res. (42)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'					common: Africa: A8, C4a, A1, C2c, C4, C8, D2 other countries: D19, D15	12, 41, 42, 46, 101, 111, 138, 169, 197, 205, 206, 218, 223
A						
B						
C						
D						
E						

Canarium schweinfurthii Engl. — AIÉLÉ

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
susc. of sap. to disc., in partic., to bl. st.: low to mod. (18, 88, 214)	susc. of logs to amb. bee. att.: mod. (18, 86, 87, 88, 151), mod. to high (69)	br. & wh. rots: heart. n. res. (18, 87, 94, 193), heart. peris. (93) w. n. res. (56, 57, 86, 99, 134)	w. n. res. to term. (56, 57, 86, 87, 88, 99, 151, 214) sap. n. res. to mod. res.: bostr. (18, 86, 87, 88, 151, 214), lyct. (18, 57, 151, 214) heart. res. to ve. res. to lyct. (57, 99)	heart. n. dur. (F) (50, 88, 89) heart. n. dur. (T + F) (51) w. n. dur. (F) (183) w. n. dur. (45, 51, 153, 214) heart. peris. (F) (37) heart. peris. (T + F) (228, 229, 246) w. peris. (27, 234)	w. n. res. (57) w. peris. to n. res. (L + T) (173, 197)	logs to be treat. agst. bl. st. (58) serv. cond. A, B, C, & E (99)	UP p. & TO pres.: heart. extr. res. (18, 86, 88, 153, 186, 214, 225), sap. perm. (18, 86, 88, 186, 214) UP p.: w. res. to ve. res. (57, 99) NP3 p. & TO pres.: heart. extr. res. (186), sap. perm. (186)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]	fr. fel. logs treat. by NP2 p.; con. (132)	pent. M. 6 & phenoxol pres. (132); phenox. M. 25 & phenox. L. 20 press. (132)	aft. 7 days, count. 12, 134, & 64 ins. holes (132); aft. 8 days, count. 13, 21, & 139 ins. holes (132)		common: D15, D2, D19, D9, B5, B3, F2, F7	18, 27, 37, 45, 50, 51, 56, 57, 58, 69, 86, 87, 88, 89, 93, 94, 99, 100, 110, 134, 138, 151, 153, 166, 173, 183, 186, 193, 197, 214, 225, 228, 229, 234, 246
A	Sp. NP3; con. (246) Sp. UP1, UP2, & NP3; con. (100)	TO, WBa7, & WBa11 pres. (246) WB2, TO1, & TO1 pres. (100)	res. to term. ≤ 91 ms, ≤ 14 ms, ≤ 16 ms, & ≤ ½ ms for con. (246); life in gr. cont. in damp areas 1.2 yr, 1 yr, 1 yr, & 1 yr for con. (100)			
B						
C						
D						
E						

Carapa spp. — CRABWOOD, African

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
		br. & wh. rots: heart. n. res. to mod. res. (193), heart. n. res. (93) w. mod. res.: (75, 151)	w. res. to term. (138) w. mod. res. to term. (75)	w. dur. (F) (37) heart. mod. dur. (F) (89) heart. n. dur. to mod. dur. (T + F) (227) w. mod. dur. (110)	w. n. res. (L + T) (173)		

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: A1, A5a other countries: D2, D15, D19, D9, D11, C5 possible: A1, A7, C3, D2, D4, D11, D15, F2, F7	37, 75, 89, 110, 138, 151, 173, 193, 214, 227
A						
B						
C						
D						
E						

Cassipourea spp. PILLARWOOD

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	(7)	(8)
			w. n. res. to term. (214) w. n. res. to w.-b. ins. (248)	heart. n. dur. (F) (89) w. n. dur. (T + F) (218, 246) w. n. dur. (214) w. peris. (248)	w. res. (T) (111) w. mod. res. (L) (111) w. mod. res. (T + M + L)(168, 169)		UP p. & TO pres.: heart. extr. res. (41, 42, 186, 214), sap. mod. res. (41, 42, 214), sap. perm. (186) NP3 p. & TO pres.: heart. extr. res. (42, 186), sap. mod. res. (42), sap. perm. (186)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: D19, D23, C3, A5 (W.T.), C8, D17	41, 42, 89, 111, 145, 168, 169, 186, 214, 218, 246, 248
A	Sp.NP3; con. (246) Posts treat. by UP p. (248)	TO1, WBa9, & WBa11 pres. (246) TO1 pres. (248)	res. to term. ≤ 43 ms, ≤ 12 ms, ≤ 91 ms, & ≤ 2 ms for con. (246); heart. of posts destr. by dec. in few yrs in Kenya (248)			
B						
C						
D						
E						

Ceiba pentandra Gaertn. — FROMAGER

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
susc. of logs to disc.: mod. to high (18, 138, 190) susc. of logs to bl. st.: high to ve. high (56, 92)	susc. of logs to amb. bee., in partic., to scol. att.: high to ve. high (56, 86, 92, 134, 138, 190) susc. of logs to amb. bee. att.: mod. to high (18, 166, 223)	br. & wh. rots: heart. peris. (18, 92, 94), w. peris. (56, 86, 99, 134)	w. peris. to n. res. to term. (99) heart. mod. res. to lyct. (99) w. n. res. to mod. res to bostr. & lyct. (56, 58, 86, 98, 103, 110, 134, 138) sap. peris. to n. res. to lyct. (223)	heart. n. dur. (F) (138) w. n. dur. (T) (92) w. n. dur. (45, 103) w. peris. to dur. (110) heart. peris. (F) (37, 190) w. peris. (234)	w. mod. res. (115) w. n. res. (92)	treat of logs neces. (58) serv. cond. A, B, C, & E (190) serv. cond. A, B, C, & E (99, 103) serv. cond. D agst. lyct. (98, 105)	UP p.: w. perm. (56, 58, 99, 103, 134, 138, 190, 234) NP p.: w. perm. (56, 86)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]				sap. ve. thick & n. dist. from heart. (190)	common: Africa: D2, D15, B3, D1, D2, D22, F2 other countries: B3, F2, F7 possible: C2, C3, D13 (violin), D18, F5	18, 37, 45, 56, 58, 86, 92, 94, 98, 99, 101, 103, 105, 110, 115, 134, 138, 151, 155, 166, 190, 223, 234
A						
B						
C						
D	green bds. 27 & 54 mm treat. by Di2 p. (155), green bds. 27 & 54 mm treat. by Di2 p. & piles for diff. treat. by NP2 p. (105)	WBcl pres. (155), WBcl + (OS1) & WBc2 + (WBa6) pres. for first treat. & OS4 pres. for protect. of piles (105)	aft. 1-3 weeks diff., protect. eff. for bds. 27 mm & bl. st. for bds. 54 mm (155); protect. eff. agst. lyct. & fun. (105)			
E						

Celtis spp. — OHIA

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of logs to amb. bee. att.: high to ve. high (18, 68, 69, 88, 214), high (236), low to mod. (87, 210, 238), ve. low (243) susc. of logs to ceramb. att. low (88)	br. & wh. rots: heart. peris. to n. res. (87, 94), heart. peris. (18, 212)	w. n. res. to term. (210, 214) sap. n. res. to mod. res. to lyct. & bostr. (18, 205, 210, 214)	heart. n. dur. (F) (50, 88, 138) heart. n. dur. (T + F) (229, 246) w. n. dur. (45, 62, 205) w. peris. to n. dur. (214) heart. peris. (F) (89) w. peris. (27, 248)		treat. of logs aft. fel. agst. ins. & fun. (18, 88) treat. of sap. agst. lyct. (205)	UP p. & TO pres.: heart. mod. res. (42, 88, 210, 214), sap. perm. (42, 88, 214) NP3 p.: heart. mod. res. (42), sap. perm. (42)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]	unbark. logs NP2 p.; con. (68) unbark. logs NP2 p. (69); unbark. logs NP2 p.; con. (132)	OS6 pres. + (oil) & OS6 pres. + (water) (68); OS4 & WBa6 + bor. 4% (69); Pent. M. 6 & Phenoxol (132)	aft. 9 ms, 2.4, 4.0, & 9.0 (con.) ins. holes/square foot (68); no trace of ins. att. aft. 1 yr of stor. (69); aft 7 days, 0, 6, & 12 (con.) ins. holes (132)	sap. n. dist. from heart. (138)	common: Africa: A5a, A5b, A1, D3 other countries: D2, D19, B5, D15, F2 possible: C2, C8, C9, D19, F2	18, 27, 42, 45, 46, 50, 68, 69, 76, 87, 88, 89, 94, 132, 138, 145, 186, 205, 210, 212, 214, 225, 228, 229, 236, 238, 246, 248
A						
B						
C						
D	NP4 p. during 1 min., 5 min., & 24 hrs (228)	WBa6 pres. (228)	pen. suff. aft. 24 hrs (50-80%) for good protect. agst. ins. (228)			
E						

Chlorophora spp. — IROKO

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	(7)	(8)
	susc. of logs to amb. bee. att.: ve. high (141, 236), ve. low to high (243), low (18, 41, 86, 87, 88, 92, 138, 151, 190, 210, 214, 223, 238), ve. low (54) susc. of logs to ceramb. att.: (86, 88, 92, 138, 151, 190, 210, 214)	br. & wh. rots: heart. ve. res. (18, 76, 87, 154), heart. res. (74, 92), heart. n. res. to res. (93, 123), heart. n. res. to mod. res. (94, 154) w. n. res. to ve. res. (56, 86, 134, 151) w. res. (58, 99)	w. res. to ve. res. to term. (41, 56, 57, 58, 87, 88, 92, 99, 124, 134, 138, 151, 210, 214) heart. n. res. to mod. res. to term. *C. havil.* (49, 53) w. mod. res. to res. to term. *R. lucf.* (154, 202) w. mod. res. to term. *R. flav.* (201) sap. n. res. to mod. res. to bostr. & lyct. (16, 86, 87, 88, 134, 151, 210, 214) heart. res. to ve. res. to lyct. (16, 57, 99)	heart. ve. dur. (F) (37, 50, 88, 89) heart. ve. dur. (T + F) (41) w. ve. dur. (45, 153, 214, 234, 246) heart. dur. (T + F) (142, 196, 218, 228, 229, 246) w. dur. (T) (92) w. dur. (103, 110, 248) w. mod. dur. (T + F) (22) w. mod. dur. (T) (183)	w. ve. res. (T) (41) w. res. (T + M + L + S) (111, 168, 169) w. res. (L + T) (169, 197) w. res. (T) (214) w. mod. res. (L + M) (148) w. mod. res. (T) (115) w. n. res. (T) (56, 112, 113, 246)	serv. cond. A & E (99, 103)	UP p. & TO pres.: heart. extr. res. (18, 41, 42, 86, 87, 88, 151, 186, 190, 210, 214, 225), sap. perm. (86, 88, 151, 214) UP p.: w. extr. res. (34, 54, 56, 153), w. res. (57, 99, 103, 234) NP3 p. & TO pres.: heart. extr. res. (42, 186) NP5 p. & WB pres.: w. extr. res. (227)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]	unbark. logs treat. by NP3 p.; con. (132) unbark. logs treat. by NP3 p.; con. (132)	Pent. M. 6 & Phenoxol pres. (132), Phenox. M. 25 & Phenox. L. 20 pres. (132)	aft. 7 days, 2 & 1 (con.) ins. holes (132); aft. 8 days, 3, 1, & 1 (con.) ins. holes (132)		common: Africa: A4, A7, B5, C1a, C1b, C3, C4, D2, D11, D15b, D15c, D19, D21 other countries: D15b, D2, D11, F3, A7, B2, E1, F7, D9b, D10, D19c, A8, B5, B7, C3, C2c, C4, C9	2, 16, 18, 22, 27, 32, 34, 37, 41, 42, 45, 49, 50, 53, 54, 56, 57, 58, 69, 71, 74, 76, 86, 87, 88, 89, 92, 93, 94, 99, 100, 101, 103, 110, 111, 112, 113, 115, 124, 132, 134, 138, 140, 141, 142, 145, 148, 151, 153, 154, 166, 168, 169, 183, 186, 190, 193, 196, 197, 201, 202, 205, 210, 214, 218, 223, 225, 227, 228, 229, 234, 236, 238, 243, 246, 248, 249
A	Sp. NP3, con. (246) Sp. NP3; con. (100)	TO1, WBa7, & WBa11 pres. (246) TO1 pres. (100)	res. to term. ≥ 97 ms in all cases (246), life in gr. cont. in damp areas 6 yrs & 2.2 yrs for con. (100)			
B						
C						
D						
E						

Chrysophyllum spp. — LONGHI

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of logs to amb. bee. att.: mod. to high (69), low (92, 93)	br. & wh. rots: heart. mod. res. (92), heart. n. res. to mod. res. (74), heart. n. res. (93, 193) w. mod. res. (57, 99)	w. mod. res. to term. (57, 92, 99) heart. res. to ve. res. to lyct. (57, 92, 99)	heart. n. dur. (T + F) (41, 218, 227) w. mod. dur. (T) (92) w. n. dur. (248)	w. mod. res. (92)	serv. cond. A, B, & E (99)	UP p.: heart. mod. res. (41, 57, 99), sap. perm. (57) NP3 p.: heart. mod. res. (41)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]				sap. is not dist. from heart. (57)	common: C3a, D15, D17 possible: A8, B3, C1, C2c, C8, C9, (W.T.), D3, D9, D11, D15, D19, F7	41, 57, 69, 74, 92, 93, 99, 193, 218, 227, 248
A						
B						
C						
D						
E						

Coelocaryon preussii Warb. — EKOUNE

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
		w. n. res. (101) w. peris. (99)	heart. n. res. to mod. res. to term. (99) w. peris. to n. res. to term. (57, 99) w. n. res. to mod. res. to bostr. & lyct. (57, 101, 103, 110)			green logs & lumb. need to be treat. with pres. (57) serv. cond. A, B, C, D, & E: (99)	UP & NP3 p.: w. perm. (57, 99, 103) Di2 p. & WBc pres.: conc. of pres. (0.4% bor. ac.) larg. suff. through. aft. 2-4 weeks diff. (105)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]				sap. slightly dist. from heart. (57)	common: B3, D1, D4, D15, F2 possible: D17	57, 99, 101, 103, 105, 110
A						
B						
C						
D	green bds. 27 & 54 mm thick treat. by Di2 p. (105) bds. in piles for diff. treat. by NP2 p. (105)	WBc pres. (105) OS4 pres. + water (105)	face to face protect. agst. fun. & ins. aft. 2-4 weeks diff. (105), protect. agst. w.-b. ins. (105)			
E						

Combretodendron africanum Exell. — ESSIA

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	(7)	(8)
	susc. of logs to amb. bee. att.: high to ve. high (69, 86)	br. & wh. rots : heart. res. (92, 212), heart. n. res. to mod. res. (74, 212) w. res. (151) w. mod. res. to res. (86) w. mod. res. (56, 99)	w. res. to term. (88, 99, 190) w. mod. res. to term. (86) w. mod. res. to term. (92) heart. res. to ve. res. to lyct. (92, 99)	w. ve. dur. (45) heart. dur. (F) (88, 89, 138, 190) w. dur. (27, 110, 234) w. mod. dur. (T) (92)	w. n. res. (L + T) (197) w. n. res. (188)	treat. of logs aft. fel. (56) serv. cond. A, B, & E (99)	UP p.: heart. extr. res. (86, 88, 92, 99, 234), w. res. (56), heart. mod. res. (212), sap. perm. (18, 86, 88, 92) NP3 p.: sap. perm. (212)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: A1, A8, C3, C4, C8 possible: C4, D9, D9d, D11, D15, F2, F7	18, 27, 45, 56, 57, 69, 74, 86, 88, 89, 92, 99, 110, 138, 151, 166, 188, 190, 197, 212, 234
A						
B						
C						
D						
E						

Cordyla africana Lour. — METONDO

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
		br. & wh. rots: heart. ve. res. (154)	w. res. to ve. res. to term. *R. flav.* (154)	w. dur. (T + F) (41, 227) w. mod. dur. (T + F) (218, 246)	w. n. res. to mod. res. (T + L) (115, 154)		UP p. & TO pres.: heart. extr. res. (41, 154, 219), sap. mod. res. (219) NP3 p. & TO & OS pres.: heart. extr. res. (154)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: B1, D9, D19a possible: A8, C4, D11, D15a, D19	41, 115, 145, 154, 218, 219, 227, 246
A	Sp. NP3; con. (246)	TO1, WBa7, & WBa11 pres. (246)	res. to term. ≥ 91 ms, ≤ 84 ms, ≥ 91 ms & ≥ 43 ms for con. (246)			
B						
C						
D						
E						

Corynanthe spp. — TSANYA

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
		br. & wh. rots: heart. mod. res. to res. (94, 154), heart. mod. res. (92)	w. mod. res. to res. to term. *R. lucf.* (154) w. mod. res. to res. to term. (92) w. ve. res. to bostr. & lyct. (92)	w. mod. dur. (T) (92)	w. ve. res. (L + T) (111) w. mod. res. to res. (T) (112, 113, 154) w. n. res. to res. (T + B) (111, 184) w. n. res. to mod. res. (92)		UP p. & WB pres.: heart. extr. res. (154), sap. perm. (154) NP3 p. & TO & OS pres.: heart. extr. res. (154), sap. perm. (154)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: A1, C3, D3, D9, D11, D15a, D16, D19, D21, D23, E3	92, 94, 111, 112, 113, 151, 154, 184
A						
B						
C						
D						
E						

Coula edulis Baill. — COULA

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	(7)	(8)
		w. ve. res. (57, 99) w. res. (101)	w. ve. res. to term. (57, 99) w. res. to ve. res. to lyct. (57, 99)	w. ve. dur. (103) w. dur. (45)	w. res. (T) (111, 112) w. mod. res. to res. (T + N) (113) w. mod. res. (T) 111, 184) w. mod. res. (57)		UP p.: w. extr. res. (57, 99)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: A5b, C3 possible: A6, A8 (W.T.), C3, C9 D15, E1	45, 57, 99, 101, 103, 111, 112, 113, 151, 184
A						
B						
C						
D						
E						

Cylicodiscus gabunensis Harms — OKAN

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	(7)	(8)
	susc. of logs to amb. bee. att.: mod. (56, 238), high (236)	br. & wh. rots: heart. ve. res. (18, 76, 210) wh. rot: heart. ve. res. (182) w. ve. res. (56, 86, 99, 151) sap. n. res. (56)	w. ve. res. to term. (99) heart. mod. res. to res. to term. *C. havil.* (49, 53) w. res. to term. (86, 88, 151, 190) sap. n. res. to mod. res. to bostr. & lyct. (18, 56, 86, 88, 145, 151, 245) heart. res. to ve. res. to lyct. (56, 86, 99)	heart ve. dur. (F) (88, 138) w. ve. dur. (27, 45, 100, 103, 234) heart. dur. to ve. dur. (T + F) (22) w. dur. (T) (183)	w. ve. res. (L + T) (173, 249) w. res. (86, 190) w. mod. res. to ve. res. (L + T) (111, 197) w. n. res. to mod. res. (T + B) (111, 184) heart. n. res. (T + L+ *Chelura*) (26) (26)	serv. cond. E. (99)	UP p. & TO pres.: heart. extr. res. (18, 86, 88, 186), sap. res. (18, 86, 88, 186) NP3 p. & TO pres.: heart. extr. res. (186), sap. res. (186)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: A8, A1, C4a other countries: B7, C4, E1, D19 possible: C9, D2, D9, D19a	18, 22, 26, 27, 45, 46, 49, 53, 56, 76, 86, 88, 99, 100, 103, 111, 138, 145, 151, 173, 182, 183, 184, 186, 190, 197, 210, 230, 234, 236, 238, 245, 249
A						
B						
C						
D						
E						

Cynometra alexandri C. H. Wright — ANGU

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of logs to amb. bee. att.: high to ve. high (214) susc. of logs to amb. bee. & ceramb. att.: low to mod. (69, 88)	br. & wh. rots; w. ve. res. (210), heart. mod. res. to res. (94) w. res. (75, 190)	w. ve. res. to term. (124, 210) heart. res. to ve. res. to term. (88, 190)	w. ve. dur. (T + F) (246) heart. dur. (F) (89) w. dur. (T + F) (196, 227, 229)	w. n. res. to mod. res. (L + T) (197)		UP p.: heart. res. to ve. res. (214, 225), sap. mod. res. (214) NP3 p. & WBa3 pres. for 48 hrs: w. extr. res. (157) SD3 p. & WBb pres.: w. mod. res. (157)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A¹					common: Africa: C3c, C4, C4a, E3 other countries: A1, A8, C2, C4, D3, D19, D19a, F7 possible: C2, D19, E1	69, 75, 88, 89, 94, 124, 145, 157, 190, 196, 197, 210, 214, 225, 227, 229, 246
A						
B						
C						
D						
E						

Dacryodes buettneri H. J. Lam — OZIGO

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of logs to amb. bee. att.: low to mod. (57, 86)	w. n. res. (57, 86, 99)	w. n. res. to mod. res. to term. *R. flav.* (201) w. n. res. to term. (57, 86, 99) heart. res. to ve. res. to lyct (57, 86) sap. n. res. to mod. res. to lyct. (57, 86)	heart. n. dur. (F) (138)	w. n. res. to mar. bor. (57, 86)	serv. cond. A, B, C, & E (99)	UP p.: w. res. (57, 86, 99), w. mod. res. (58)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]				sap. slightly dist. from heart. (57)	common: F7, F2, B1, D15, B5, D9b, D17, D19, D22 possible: C3	32, 57, 58, 86, 99, 100, 101, 138, 201
A	Sp. UP1, UP2, & NP3; con. (100)	WBb2, TO1, & TO1 pres. (100)	life in gr. cont. in damp areas in Iv.-Cst. 1.9 yr, 5.1 yrs, 3.2 yrs; & 1.1 yr for con. (100)			
B						
C						
D						
E						

Dacryodes spp. — SAFUKALA

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
		br. & wh. rots: w. peris. to res. (154), heart. n. res. (92) w. n. res. to fun. (57)	w. n. res. to mod. res. to subt. term. (154) w. n. res. to term. (92) w. n. res. to dry-w. term. (103) heart. res. to ve. res. to lyct. (57)	w. mod. dur. (T) (92) w. mod. dur. (103, 110)	w. n. res. to mod. res. (T) (92, 154) w. mod. res. (T) (115)	serv. cond. A, B, C, & E (103) serv. cond. D in areas fav. to dry-w. term. (103)	UP p. & WB pres.: heart. extr. res. (154), sap. perm. (154) NP3 p. & TO pres.: heart extr. res. (154), sap. perm. (154)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: F7 possible: D15, F2, D19, F7, C3, A8 (W.T.)	57, 92, 103, 110, 115, 154
A						
B						
C						
D						
E						

Dacryodes igaganda Aubr. & Pell. IGAGANDA

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
		w. n. res. (57)	w. n. res. to term. (57) w. n. res. to dry-w. term. (110) heart. res. to ve. res. to lyct. (57)	w. mod. dur. (103, 110)	w. mod. res. (T) (184) w. n. res. (57)	serv. cond. A, B, C, D, & E (103)	UP p.: w. res. to extr. res. (103)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: F2, F7 possible: C9, D15, D19, F7	56, 57, 103, 110, 184
A						
B						
C						
D						
E						

Dalbergia melanoxylon Guill. & Perr. BLACKWOOD, African

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
			sap. peris. in cond. fav. to bostr. (246)	heart. ve. dur. (F) (37, 190) w. ve. dur. (214, 246) heart. dur. to ve. dur. (T + F) (227, 229) w. mod. dur. (T) (144)			

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]	cross-cuts of logs treat. by NP1 p. (131)	"shellac" pres. (131)	protect. of logs during exportation; pres. acts as sealing agent & painting possible aft. treat. (131)		common: D21, D18, D6, D19, D23, D24, D9, D13b, F1 other countries: D13b, D18, D23, C8, C10, D6	37, 41, 75, 131, 144, 153, 190, 205, 214, 227, 229, 246
A						
B						
C						
D						
E						

Daniellia spp. — FARO

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
susc. of sap. of logs to disc.: mod. to high (18, 56, 190)	susc. of logs to amb. bee. att.: mod. to high (86, 88) susc. of logs to ceramb. att.: low (86, 88) susc. of logs to amb. bee. & ceramb. att.: low to mod. (56, 151)	w. n. res. (57, 86, 210) w. peris. (151)	heart. n. res. to term. *C. havil.* (49, 53) w. n. res. to term. (56, 86, 88, 151) sap. n. res. to bostr. & lyct. (18, 56, 57, 86, 88, 151, 190)	heart. n. dur. (T + F) (196, 227) heart. n. dur. (F) (50, 138) w. n. dur. (T) (183) w. n. dur. (45, 110) heart. peris. (F) (88, 89, 190) w. peris. (27, 234)	w. n. res. to mar. bor. (56, 57)	treat. of logs aft fel. agst. fun. & ins. (57, 86) serv. cond. A, B, C, D, & E (56)	UP p. & TO pres.: heart. res. (88, 190, 210), sap. perm. to mod. res. (86, 88), sap. perm. (190) UP p.: w. extr. res. (151, 234), w. mod. res. (56, 57)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]				sap. slightly dist. from heart. (57)	common: B3, C3, D2, D15, F2 possible: D2, D9b, F7	18, 27, 45, 49, 50, 53, 56, 86, 88, 89, 100, 110, 138, 151, 155, 183, 190, 196, 210, 227, 234
A	Sp. UP1, UP2, & NP3; con. (100)	WB2, TO1, & TO1 pres. (100)	life in gr. cont. in damp areas 2.5 yrs, > 10 yrs, 3 yrs, & 1.2 yr for con. (100)			
B						
C						
D	green lumb. treat. by Di2 p. (155)	WBc1 (+ OS1) & WBc2 (+ OS1) pres. (155)	pen. suff. through. for bds. 57 mm thick; protect. agst. ins. & fun. (155)			
E						

Desbordesia spp. — ALEP

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	(7)	(8)
	susc. of logs. to amb. bee. att.: mod. to high (92, 166)	br. & wh. rots: heart. res. to ve. res. (94), heart. res. (193), heart. mod. res. (92) w. res. (151)	w. n. res. to term. (92) w. mod. res. to res. to bostr. & lyct. (92, 166)	heart. ve. dur. (100) w. dur. (45) sap. mod. dur. (100) w. mod. dur. (T) (92) sap. n. dur. (57)	w. n. res. to mod. res. (92) w. n. res. (T + B) (184) w. peris. to res. (113)		UP p.: heart. res. (100), sap. perm. (100)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]				sap. slightly dist. from heart. (57)	common: Africa: A8 possible: A4 (W.T.), A7 (W.T.), A8 (W.T.)	45, 57, 86, 92, 94, 100, 111, 113, 151, 166, 184, 193
A						
B						
C						
D						
E						

Dialium spp. — EYOUM

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of sap. to ins. att.: low (93)	br. & wh. rots: heart. mod. res. to ve. res. (94), heart. res. to ve. res. (93, 193) w. ve. res. (57, 99)	w. ve. res. to term. (57, 99) w. res. to ve. res. to term. (93) heart. res. to ve. res. to lyct. (57, 99)	heart. mod. dur. (T + F) (41, 218)	w. ve. res. (T) (57, 112, 113, 148) w. mod. res. to ve. res. (L + T) (115, 197) w. mod. res. to ve. res. (T + M + L + S) (111, 169) w. res. to ve. res. (T + B) (111, 184) w. mod. res. to ve. res. (T + B + N) (113)		UP p.: w. extr. res. (99)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'					possible: A7, A8, B9, C1, C6, C8, C10, E3	41, 57, 93, 94, 99, 111, 112, 113, 115, 148, 169, 184, 193, 197, 218, 249
A						
B						
C						
D						
E						

Diospyros spp. — EBÈNE

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
		br. & wh. rots: heart. res. (87) heart. mod. res. (18) w. ve. res. (86)	w. res. to term. (86, 87, 88) w. n. res. to mod. res. to term. (201) sap. n. res. to mod. res. to lyct. (206, 225)	heart. ve. dur. (F) (37, 38) w. ve. dur. (27, 45) w. mod. dur. to ve. dur. (234) w. n. dur. to mod. dur. (250) sap. peris. (T + F) (41, 218)			UP p. & TO pres.: heart. extr. res. (86, 88, 234), sap. mod. res. (41), sap. perm. (18) NP3 p. & TO pres.: sap. mod. res. (41)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'				sap. is mostly traded locally (41)	common: Africa: C8, C5, A5a, (W.T.), C2a other countries: D23, D21, D13, D18, D19, D24, D2, D5	18, 27, 37, 41, 45, 86, 87, 88, 138, 153, 190, 201, 206, 218, 223, 225, 234, 250
A						
B						
C						
D						
E						

Distemonanthus benthamianus Baill. MOVINGUI

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	(7)	(8)
	susc. of logs to amb. bee. att.: low (243), mod. (238)	br. & wh. rots: heart. mod. res. (87, 210), w. mod. res. (56, 99, 151) w. n. dur. to mod. dur. (57, 86)	heart. ve. res. to term. *C. havil.* (49, 53) w. ve. res. to term. (58, 138) w. res. to term. (56, 87, 134, 205) w. mod. res. to ve. res. to term. (57, 86, 88, 99, 151) heart. res. to ve. res. to lyct. (57, 58, 86, 134)	w. ve. dur. (234) w. dur. (103, 110, 205) heart. mod. dur. (F) (22, 37, 50, 88, 89) w. mod. dur (T) (22, 183) w. mod. dur. (27, 45, 100, 153)	w. ve. res. (99) w. n. res. (111) w. peris. to n. res. (184)	serv. cond. A, B, & E (99, 103)	UP p. & TO pres.: heart. res. (18, 86, 88, 186, 246) UP p.: w. res. (49, 153, 234), w. mod. res. (57, 99, 100, 103) NP3 p. & TO pres.: heart. res. (87, 186)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]				sap. slightly dist. from heart. (57, 138) good res. to acids (134)	common: Africa: C3, D2, D15 other countries: D19b, D11, D9, F3, C2c, C3, C9, D2, D15c, D23, F7 possible: C1a, C2, C3, C9, D15 F2	18, 22, 27, 37, 45, 49, 50, 53, 56, 57, 58, 86, 87, 88, 89, 99, 100, 101, 103, 110, 111, 134, 138, 151, 153, 183, 184, 186, 190, 205, 210, 234, 238, 243, 246
A	Sp. UP1; con. (100)	WBb2 pres. (100)	life in gr. cont. in damp areas 3 yrs & 2.3 yrs for con. (100)			
B						
C						
D						
E						

Dumoria spp. — MAKORÉ

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of logs to amb. bee. att.: mod. (243), low to mod. (18, 56, 86, 88, 151, 166) susc. of logs to ceramb. att.: low to mod. (18, 88, 151)	wh. rot: heart. res. (182) br. & wh. rots: heart. ve. res. (18, 212), heart. res. (87) w. ve. res. (56, 57, 86, 99, 151) w. res. (16, 58)	heart. ve. res. to term. *C. havil.* (49) w. ve. res. to term. (56, 57, 86, 99, 234) w. res. to term. (58, 87, 88, 151, 190) sap. n. res. to mod. res. to bostr. & lyct. (18, 86, 88, 140, 151) w. res. to ve. res. to bostr. & lyct. (56, 58, 86, 87, 99)	heart. ve. dur. (F) (37, 50, 88, 89, 138, 190) w. ve. dur. (27, 45, 103, 110, 153, 234) w. dur. (T) (183)	w. res. to ve. res. (L + T) (112, 197) w. mod. res. to ve. res. (T + B) (113)	treat. of green logs & lumb. (56) serv. cond. A & E (99)	UP p. & TO pres.: heart. extr. res. (18, 86, 88, 186, 190, 212), sap. mod. res. (18, 86, 88, 186, 212) UP p.: w.extr. res. (57, 99, 151, 153), w. res. (234) NP3 p. & TO pres.: heart. extr. res. (186), sap. mod. res. (186)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: F2, F7, D11, D19, D9, A8, B2, B4, C3, C9, D2, D15, D9b, D23, E1, F5 possible: B5, C9, D9a, D21	16, 18, 27, 32, 37, 45, 49, 50, 56, 57, 58, 86, 87, 88, 89, 99, 100, 101, 103, 110, 112, 113, 138, 140, 145, 151, 153, 166, 182, 183, 186, 190, 197, 201, 212, 234, 243
A	Sp. NP3; con. (100)	TO1 pres. (100)	life in gr. cont. in Iv.-Cst. 6 yrs & 2.5 yrs for con. (100)			
B						
C						
D						
E						

Entandrophragma angolense C. DC. — TIAMA

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of logs to amb. bee. att.: high (54, 236), mod. (192, 238), low (27, 58, 69, 88, 93, 238), ve. low (243)	br. & wh. rots: heart. n. res. to mod. res. (18, 94), heart. n. res. (92, 93, 193) heart. peris. to n. res. (76, 211) wh. rot: w. mod. res. (75), heart. peris. (182) w. mod. res. (151, 190)	w. mod. res. to term. (18, 151) w. n. res. to term. (57, 92, 99, 214) heart. n. res. to term. *C. havil.* (49) sap. n. res. to mod. res. to lyct. (57, 58, 214) heart. n. res. to ve. res. to lyct. (99)	heart. dur. (F) (89) w. dur. (69) heart. mod. dur. (F) (37, 50, 88) heart. mod. dur. (T + F) (22, 246) w. mod. dur. (27, 45, 103, 110, 214) heart. n. dur. (T + F) (196, 229, 230) w. n. dur. (T) (183) heart. peris. to n. dur. (T + F) (227, 229)	w. n. res. (57, 92)	serv. cond. A, B, C, &E (99) serv. cond. D in areas fav. to term. (103)	UP p. & TO pres.: heart. extr. res. (18, 42, 88, 186, 214, 225, 234), sap. res. (18, 88, 186, 214), sap. mod. res. (42) UP p.: w. extr. res. (151, 153), w. mod. res. (58, 99, 103) NP3 p. & TO pres.: heart. extr. res. (42, 186), sap. mod. res. (186)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'					common: D15, F7, D2, D11, C9, B2, C1, C3, D9d, D9b, D19c, E1	18, 22, 27, 32, 37, 42, 45, 49, 50, 54, 57, 58, 69, 75, 76, 88, 89, 92, 93, 94, 99, 100, 101, 103, 110, 134, 151, 153, 182, 183, 186, 190, 192, 193, 196, 211, 214, 225, 227, 229, 230, 234, 236, 238, 243, 246
A	green lumb. treat. by NP5 p.; con. (229) Sp. UP1; con. (100)	OS5 pres. + (oil) (229) WBb2 pres. (100)	aft. 13 ms in gr. cont. full res. to term. & 99% con. destr. (229), life in gr. cont. in damp areas 4.6 yrs & 1 yr for con. (100)			
B						
C						
D						
E						

Entandrophragma candollei Harms — KOSIPO

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of logs to amb. bee. att.: low (238), low to mod. (69), mod. to high (141), high (236)	br. & wh. rots: heart. mod. res. (18), w. mod. res. (57, 86, 99, 151)	w. mod. res. to term. (57, 86, 99) w. n. res. to dry-w. term. (103) heart. n. res. to term. *C. havil.* (49) sap. n. res. to mod. res. to bostr. & lyct. (57, 86, 134, 151) heart. ve. res. to lyct. (57, 99)	w. dur. (69, 110) w. mod. dur. (T) (183) heart. mod. dur. (F) (37, 50) w. mod. dur. (103)	w. n. res. (57, 86)	serv. cond. A, B, & E (99) serv. cond. D in areas fav. to dry-w. term. (103)	UP p. & TO pres.: heart. res. (18, 86), heart. mod. res. (234), sap. perm. (18) UP p.: w. res. (103), w. mod. res. (57, 99)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: D15, C2, C3, D2, D11, D19b, E1, F2 possible: B5, B4a, C3, C9, D9, D15c, F7	18, 22, 37, 45, 49, 50, 57, 58, 69, 86, 94, 99, 100, 101, 103, 110, 134, 141, 151, 183, 190, 234, 236, 238
A	Sp. UP1; con. (100)	WBb2 pres. (100)	life in gr. cont. in Iv.-Cst. 2.3 yrs & 1 yr for con. (100)			
B						
C						
D						
E						

Entandrophragma cylindricum Sprague — SAPELLI

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of logs to amb. bee. att.: high (243), mod. to high (141, 238), mod. (236), low to mod. (238), low (69, 86, 88, 138, 190, 243) susc. of green lumb. to amb. bee. att.: low to mod. (211)	br. & wh. rots: heart. mod. res. (18, 87, 211), heart. n. res. to mod. res. (94) wh. rot: heart. n. res. (182), w. mod. res. (99), w. n. res. to mod. res. (57, 86)	w. res. to term. (56, 58, 99) heart. mod. res. to term. *C. havil.* (49) w. res. to term. *R. flav.* (201) w. mod. res. to term. (86, 88, 214) sap. n. res. to mod. res.: lyct. (57, 140, 145), bostr. & lyct. (18, 86, 88, 211)	w. dur. (T) (183) w. dur. (69, 110) heart. mod. dur. (F) (12, 37, 50, 88, 138) heart. mod. dur. (T + F) (22, 196, 227) w. mod. dur. (27, 45, 153, 214) w. n. dur. (234)	w. peris. to n. res. (L + T) (197)	serv. cond. A, B, & E (99) serv. cond. D in areas fav. to dry-w. term. (103, 196)	UP p. & TO pres.: heart. res. (18, 86, 88, 190, 214, 234), sap. mod. res. (18, 86, 88, 214) UP p.: w. res. (57, 103), w. mod. res. (99) NP p.: w. res. to extr. res. (87)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: F2, F7, D15, D9, D9d, D9b, B2, C3, C9, D11, D19, D19b, E1	2, 16, 18, 22, 27, 32, 37, 45, 49, 50, 56, 57, 58, 69, 86, 87, 88, 89, 94, 99, 100, 101, 103, 110, 134, 138, 140, 141, 145, 153, 182, 183, 190, 196, 197, 201, 211, 214, 225, 227, 234, 236, 238, 243, 246
A	Sp. UP1; con. (100)	WBb2 pres. (100)	life in gr. cont. in damp areas 2.4 yrs & 1.2 yr for con. (100)			
B						
C						
D						
E						

Entandrophragma utile Sprague — SIPO

NATURAL DURABILITY

GREEN LOGS AND LUMBER — FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED) — LABORATORY TESTS		WOOD IN SERVICE (ROUND OR CONVERTED) — FIELD TESTS & PERFORMANCE IN SERVICE		EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	(7)	(8)
	susc. of logs to amb. bee. att.: high (243), mod. (236), low (86, 92, 93, 151, 190, 238)	br. & wh. rots: heart. res. (74, 92), heart. mod. res. (18, 75, 76, 211), heart. n. res. to res. (94), heart. n. res. (93, 193) wh. rot: heart. n. res. (182), w. res. (16, 151), w. mod. res. (99)	w. res. to term. (57, 86, 99) w. n. res. to mod. res. to term. (56, 58, 86, 88, 151, 214) w. n. res. to mod. res. to: term. *C. havil.* (49), term. *R. flav.* (201), term. *R. lucf.* (92, 93) sap. n. res. to mod. res.: to lyct. (86, 88), to bostr. & lyct. (18, 151, 211, 214)	heart. dur. (F) (37, 88, 89) w. dur. (T) (183) w. dur.: (27, 110, 153, 234) heart. mod. dur. (F) (50) w. mod. dur. (T + F) (22, 196, 227) w. mod. dur. (T) (92) w. mod. dur. (57, 103)	w. n. res. (57, 86, 197) w. peris. to n. res. (92)	serv. cond. A, B, & E (99) serv. cond. D in areas fav. to dry-w. term. (103, 196)	UP p. & TO pres.: heart. extr. res. (18, 86, 88, 134, 186, 190, 225, 234) UP p.: w. res. (103), w. mod. res. (99) NP3 p.: heart. extr. res. (186)

PRESERVATIVE TREATMENTS

EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	SUPPLEMENTARY INFORMATION — REMARKS	USES	REFERENCES
A[1]					common: D2, F2, F7, D15b, D9d, B2, C3, C9, D11, D19b	16, 18, 22, 27, 32, 37, 45, 49, 50, 56, 57, 58, 74, 75, 76, 86, 88, 89, 92, 93, 94, 99, 100, 101, 103, 110, 134, 151, 153, 182, 183, 186, 190, 193, 196, 197, 201, 211, 214, 225, 227, 234, 236, 238, 243
A	Sp. NP3; con. (100)	TO1 pres. (100)	life in gr. cont. in damp areas 5 yrs & 1 yr for con.: (100)			
B						
C						
D						
E						

Eribroma oblonga Bod. — EYONG

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	(7)	(8)
susc. of logs to bl. st. aft. fel.: mod to ve. high (56, 57, 86, 134, 151, 212, 234)	susc. of logs to amb. bee. att.: low to mod. (37, 56, 86, 88), mod. to high (57, 212)	br. & wh. rots: heart. n. res. (18, 212), w. mod. res. (99) w. n. res. (57, 86, 151)	w. mod. res. to term. (57, 110) w. n. res. to term. (86, 88, 101, 151) heart. res. to ve. res. to lyct. (57, 110) sap. n. res. to lyct. (57, 134)	heart. mod. dur. (F) (138) w. mod. dur. (103, 110) heart. n. dur. (F) (37, 88, 89, 153) w. peris. to n. dur. (45, 153, 234)		treat. of logs aft. fel. (56, 57, 134) serv. cond. A, B, C, & E (138) serv. cond. D in areas fav. to dry-w. term. (103)	UP p. & TO pres.: heart. extr. res. (86, 88, 186, 212, 234), sap. perm. (86, 88, 186, 212) UP p.: w. extr. res. (57, 151, 153), sap. perm. (151), w. res. (99, 103) NP3 p. & TO pres.: heart. extr. res.(186), sap. perm. (186)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'				sap. ve. thick & slightly dist. from heart. (134)	common: Africa: C3, D19 other countries: F2, F7, B3, C3, C9, D2, D19 possible: C7, C8, D2, D9, F5	16, 18, 37, 45, 56, 57, 86, 88, 89, 99, 101, 103, 110, 134, 138, 151, 153, 186, 212, 234
A						
B						
C						
D						
E						

Erythrophleum spp. — TALI

NATURAL DURABILITY

GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	(7)	(8)
	susc. of logs to amb. bee. att.: low to mod. (69, 93) susc. of logs to bostr. att.: mod. (246)	br. & wh. rots: heart. ve. res. (18, 74, 154), heart. res. (93, 193) w. ve. res. (56, 58, 151, 190) w. res. (57, 86, 99)	w. ve. res. to term. (41, 56, 57, 83, 86, 99, 124, 138, 151, 190, 246, 248) w. res. to ve. res. to term. *R. lucf.* (154, 193) heart. ve. res. to term. *C. havil.* (49, 53) w. res. to ve. res. to lyct. (12, 41, 57, 86, 92, 99, 145, 151)	heart. ve. dur. (T + F) (22, 218, 227, 228, 229) w. ve. dur. (100, 103, 167, 205, 214) heart. dur. to ve. dur. (T + F) (22, 41, 123, 196, 246) w. dur. (45, 69, 234, 248)	w. ve. res. (18, 115, 138, 190, 214) w. res. to ve. res. (T + M + L + S) (111, 169) w. res. to ve. res. (L + T) (197) w. res. (86, 111, 246) w. mod. res. (T + B) (111, 184) w. n. res. to mod. res. (T) (112, 113)		UP p. & TO pres.: heart. extr. res. (41, 86, 154) UP p.: w.extr. res. (57), w. res. (99, 100)

PRESERVATIVE TREATMENTS / SUPPLEMENTARY INFORMATION

EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: A5b, A8, B7, C4, C9, F1 other countries: C4, E3, A8, D19, A7, B1, B7, C9, D15c possible: A1, A4, B4, F3	12, 18, 22, 41, 45, 49, 53, 56, 57, 58, 69, 74, 83, 86, 92, 93, 99, 100, 101, 103, 111, 112, 113, 115, 123, 124, 134, 138, 145, 151, 154, 167, 169, 184, 190, 193, 196, 197, 205, 214, 218, 227, 228, 229, 234, 246, 248
A	Sp. NP3; con. (246)	TO1, WBa7, & WBa11 pres.: (246)	res. to term. ≥ 90 ms ≥ 97 ms, ≥ 97 ms, & ≤ 84 ms for con. (246)			
B						
C						
D						
E						

Erythroxylum mannii Oliv. — LANDA

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
		w. res. (56, 57, 134) w. mod. res. (86, 99, 101)	w. res. to ve. res. to term. (57, 86, 99, 101) w. res. to ve. res. to bostr. & lyct. (56, 57, 86, 99, 101)	w. dur. (103)	serv. cond. A, B, & E (99)		UP p.: w. mod. res. (99)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: D15, D11 other countries: D2, D15b, F2, F5, F7 possible: C9, D15, D2, D9, C3, F7	56, 57, 86, 99, 100, 101, 103, 134, 138. 145
A	Sp. UP1, UP2, & NP3. (100)	WB, TO1, & TO1 pres. (100)	res. to fun. during 2 yrs, 8 yrs, & 3.1 yrs (100)			
B						
C						
D						
E						

Fagara spp. — OLON

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
		w. mod. res. (99) w. n. res. (86, 101)	w. mod. res to term. (86, 99, 101) w. n. res. to mod. res. to dry-w. term. (58, 101) heart. res. to ve. res. to lyct. (58, 99)	w. dur. (110) w. mod. dur. (103) w. n. dur. (100)	w. peris. (T) (184)	serv. cond. A, B, & E (99) serv. cond. D in areas fav. to dry-w. term. (103)	UP p.: w. res. (103), w. mod. res. (99)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]				sap. slightly dist. from heart. (86)	common: F2, D9, D15, F7 possible: D2, F2, A1, A7, A7, D2, D23	56, 58, 86, 99, 100, 101, 103, 110, 138, 184
A	Sp. UP1, UP2, & NP3; con. (100)	WB, TO1, & TO1 pres. (100)	life in gr. cont. in damp areas 2.1 yrs, 6 yrs, 2.7 yrs, & 1 yr for con. (100)			
B						
C						
D						
E						

Fagaropsis angolensis Gardner — MAFU

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
				heart. dur. (T + F) (41, 218) w. n. dur. (248) w. peris. to n. dur. (246) heart. peris. (T + F) (246)	w. peris. (T + M) (41, 168, 169)		UP p. & TO pres.: heart. res. (41, 42), sap. mod. res. (42) NP3 p. & TO pres.: heart. res. (41, 42), sap. mod. res. (42)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: D2, D11, C3, C1b, D19 possible: D19, D14, D23, F5, F7	41, 42, 168, 169, 218, 246, 248
A	Sp. NP3; con. (246)	TO1, WBa7, & WBa11 pres. (246)	res. to term. ≥ 43 ms, ≥ 43 ms, ≤ 4 ms & ≤ 2 weeks for con. (246)			
B						
C						
D						
E						

Gilbertiodendron dewevrei J. Leonard — LIMBALI

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER — FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED) — LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
		br. & wh. rots: heart. mod. res. to res. (193), heart. mod. res. (93), heart. n. res. to res. (59, 94) w. mod. res. (57)	w. res. to term. (57) w. n. res. to term. (93) heart. ve. res. to lyct. (57)	heart. ve. dur. (F) (138) heart. ve. dur. (T) (126)			NP3 p. & WBa3 & WBb pres.; w. extr. res. (157) DS3 p. & WBb pres.: w. mod. res. (157)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]				susc. to heavy checking during seasoning (57)	common: Africa: C3, D15c, B7, A8 (W.T.) other countries: C3, D9b, D15a, D19, E1 possible: A1, A5, A7, A8, B4, C1, C2, C3, C9, D15a, D15c, D19	57, 59, 93, 94, 126, 138, 157, 193, 198
A						
B						
C						
D						
E						

Gossweilerodendron balsamiferum Harms — TOLA

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
susc. of logs to inc. dec.: ve. low to low (56, 92)	susc. of logs to amb. bee. & ceramb. att.: low to mod. (86, 88, 190) susc. of logs to amb. bee. att.: high (69), mod. (87, 166, 223)	br. & wh. rots: heart. ve. res. (76, 211), heart. res. 74, 87, 92, 193), heart. n. res. to res. (94, 154) w. ve. res. (86) w. res. (16, 56) w. mod. res. (57, 99)	heart. res. to ve. res. to term. *R. lucf.* (154) heart. res. to term. (56, 86, 87, 92, 134) w. n. res. to mod. res. to term. *R. flav.* (201) sap. n. res. to mod. res.: bostr. & lyct. (56, 86, 88, 134, 190), lyct. (57, 145, 205, 223), bostr. (87, 166)	w. ve. dur. (134, 234) heart. dur. (F) 37, 89, 190) w. dur. (103, 110, 153) w. dur. (T) (88) w. mod. dur. (T + F) (22) w. mod. dur. (205)	w. n. res. (T) (154, 197) w. peris. to n. res. (92)	serv. cond. A, B, & E (99, 103)	UP p. & TO pres.: heart. res. (86, 88, 134, 186, 190), sap. perm. (86, 88, 186) UP p. & WB pres.: w. res. (154) UP p.: w. res. (56, 57, 103), w. mod. res. (99) NP3 p. & TO pres.: heart. res. (186), sap. perm. (186)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]	green sp. NP2; con. (69)	OS4 pres. & powder cons. of WBa6 + bor. 4% (69)	aft. 1 yr under outside cond., treat. sp. intact & con. att. by ins. for 4-6 ms (69)	sap. slightly dist. from heart. (138) w. has strong smell (190)	common: D15, F2, D2, D11, D9, D19, D16, B2, C1, C9, F5 possible: C3, C4, F3	16, 22, 37, 56, 57, 58, 69, 74, 76, 86, 87, 88, 89, 92, 94, 99, 100, 101, 103, 110, 115, 134, 138, 145, 153, 154, 166, 186, 190, 193, 197, 201, 205, 211, 223, 234, 261
A	Sp. UP2; con. (100)	TO1 pres. (100)	life in gr. cont. 10 yrs & 1.9 yr for con. (100)			
B						
C						
D						
E						

Guarea spp. — BOSSÉ

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of logs to amb. bee. att.: mod. in sap. (236), low to mod. (86, 88, 151, 238), low (243)	br. & wh. rots: heart. res. (74, 87, 94), heart. n. res. (76, 211) wh. rot: heart. n. res. (182), w. res. (86, 99, 151), w. mod. res. (56)	w. res. to term. (99) w. res. to term. *R. flav.* (201) w. res. to dry-w. term. (49) w. mod. res. to term. (57, 86, 87, 88, 134, 151, 214) sap. mod. res. to bostr. & lyct. (145, 151) heart. ve. res. to lyct. (57, 99)	heart. ve. dur. (F) (89) w. ve. dur. (45) heart. dur. (F) (37, 88, 190) w. dur. (27, 103, 110, 153, 214) w. mod. dur. (T + F) (22) w. mod. dur. (T) (183) heart. mod. dur. (F) (50, 138)		serv. cond. A & E (99) serv. cond. A, B, & E (103)	UP p. & TO pres.: heart. extr. res. (18, 86, 87, 88, 186, 211, 214, 225), sap. perm. (18, 86, 88, 134, 186, 211, 214) NP3 p. & TO pres.: heart. extr. res. (186), sap. perm. (186) NP3 p. & WBa3 pres.: w. extr. res. (157) SD3 p. & WBb pres.:w. mod. res. (157)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]				often a substitute for *Khaya* spp. (190) smell of cedar wood (32)	common: B2, D11, D4, D9a, D9b, D15b, F7, D2, D19b, E1, C3, C9, F2	18, 22, 27, 32, 37, 45, 49, 50, 56, 57, 58, 74, 76, 86, 87, 88, 89, 94, 99, 101, 103, 110, 134, 138, 145, 151, 153, 157, 182, 183, 186, 190, 197, 201, 211, 214, 225, 234, 236, 238, 243
A						
B						
C						
D						
E						

Guibourtia arnoldiana J. Leonard — MUTENYE

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
		br. & wh. rots: heart. ve. res. (94)	w. res. to term. (57) w. res. to bostr. & lyct. (57)	w. dur. (103, 110)		serv. cond. A, B, & E (103)	UP p.: w. res. (103)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'					common: D2, D9, D11, D19, F7 possible: A1, A7, C3, D19, D23, F2	57, 94, 103, 110
A						
B						
C						
D						
E						

Guibourtia coleosperma J. Leonard — COPALIER

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
		w. ve. res. (57)	heart. res. to ve. res.: term. (12), lyct. (12) sap. n. res. to mod. res. to lyct. (12)	w. mod. dur. (205) heart. n. dur. (T + F) (123) w. n. dur. (154)	w. n. res. to mod. res. (T + L) (115, 154)		UP p. & WB pres.: w. res. (154) UP p.: w. res. (191)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'					common: Africa: A8, D19 other countries: A8, D9, D11, D15, F2, F5 possible: C1, D9, D11, D15, F7	12, 57, 115, 123, 154, 190, 191, 205
A						
B						
C						
D						
E						

Guibourtia spp. — BUBINGA

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of logs to amb. bee. att.: low (56, 58)	br. & wh. rots: w. mod. res. to res. (57) heart. ve. res. (56) w. res. (57) w. mod. res. (86)	w. res. to ve. res. to term. (57, 58, 86, 99) w. res. to term. *R. flav.* (201) heart. res. to ve. res. to bostr. & lyct. (56, 57, 58, 86, 99)	w. ve. dur. (103) w. dur. (100) w. mod. dur. (27)		serv. cond. A, B, & E (99)	UP p.: w. res. (56, 57, 86), w. mod. res. (103) NP3 p. & WBa3 pres.: w. extr. res. (157) DS3 p. & WBb pres.: w. mod. res. (157)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'				often a substitute for rosewood in high quality furniture (56)	common: C3, C9, D2, D10, D11, D18, D19, F7 possible: D5, D9, D15, D21, D22, D23	27, 45, 56, 57, 58, 86, 99, 101, 103, 110, 138, 157, 190, 201
A						
B						
C						
D						
E						

Juniperus procera Hochst. — CEDAR, African

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
		br. & wh. rots: heart. ve. res. (87)	w. ve. res. to term. (87, 203, 212, 246) w. res. to term. (41, 142) w. mod. res. to res. to term. *R. lucf.* (145) w. mod. res to term. (190) sap. n. res. to term. (248)	w. ve. dur. (212, 246, 248) heart. dur. to ve. dur. (T + F) (142, 196, 227) heart. dur. (T + F) (41, 111, 218) heart. dur. (F) (190) sap. peris. (214, 248)	w. mod. res. to res. (T + M + L + S) (111, 168, 169, 227)		UP p. & TO pres.: heart. extr. res. (41, 87, 190, 212, 214, 225, 248), sap. mod. res. (214)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: D8, D19, A4, A5a, D15, C3, C9, D2, F5, D15c	41, 87, 111, 142, 145, 168, 169, 190, 196, 203, 212, 214, 218, 225, 227, 246, 248
A						
B						
C						
D						
E						

Khaya spp. — ACAJOU d'Afrique

NATURAL DURABILITY

GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	(7)	(8)
	susc. of logs to amb. bee. att.: high to ve. high (238, 243), high (54, 236), mod. to high (141), low to mod (18, 69, 86, 87, 138, 186, 190, 192, 214, 223) susc. of logs to ceramb. att.: low to mod. (30, 86, 87, 186, 190, 214)	br. & wh. rots: heart. n. res. to mod. res. (18, 79, 87), heart. n. res. (76, 211), w. pe-ris to n. res. (172) wh. rot: heart. n. res. (182) w. mod. res. (16, 57, 58, 86, 99)	w. mod. res. to term. (57, 86, 99) w. mod. res. to term. *R. flav.* (201) heart. n. res. to term. *C. havil.* (49, 53, 103) sap. n. res. to mod. res. to bostr. & lyct. (18, 58, 86, 87, 88, 151, 190, 214, 245) heart. res to ve. res. to lyct. (57, 58, 99)	w. dur. (69, 110, 234) w. n. dur. to dur. (T) (49) heart. mod. dur. (F) (37, 50, 88, 89, 138) w. mod. dur. (27, 45, 103, 214) w. n. dur. (T + F) (22, 196, 227, 229)	w. n. res. (57, 86, 169)	treat. of logs (30) serv. cond. A, B, & E (99) serv. cond. D in areas fav. to dry-w. term. (103, 196)	UP p. & TO pres.: heart. extr. res. (18, 79, 182, 190, 214, 225), heart. res. (234) UP p.: w. res. (103), w. mod. res. (57, 99) NP3 p. & TO pres.: heart. extr. res. (186)

PRESERVATIVE TREATMENTS

EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)
A[1]	fr. fel. logs treat. by NP2 p.; con. (192)	OS6 pres. (192)	aft. 2 weeks of stor. in Takoradi Harbour, 9.7 & 59.3 *ins.* holes per square metre: (192)
A	green lumb. treat. by NP5 p., 12 hrs (230), green lumb. treat. by NP5 p., 12 hrs; con. (229)	OS5 pres. + (oil) (230) OS5 pres. + (diesel) (229)	aft. 17 ms in gr. cont. in Uganda, 17/20 intact (230); aft. 13 ms, treat. lumb. intact & con. 80% destr. (229)
B			
C			
D			
E			

SUPPLEMENTARY INFORMATION

REMARKS	USES	REFERENCES
	common: B2, D2, D15b, D11, F2, C1a, C3, D9d, D19b D23, E1	16, 18, 22, 27, 30, 32, 37, 45, 49, 50, 53, 54, 56, 57, 58, 69, 76, 79, 86, 87, 88, 89, 99, 101, 103, 110, 138, 140, 141, 145, 151, 169, 172, 182, 183, 186, 190, 191, 192, 196, 197, 201, 211, 214, 223, 225, 227, 229, 230, 234, 236, 238, 243, 245, 246

Khaya spp. — BISSILOM

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of logs to amb. bee. att.: low (243)	br. & wh. rots: heart. res. to ve. res. (154) w. n. res. (57)	w. res. to term. (52, 75, 138, 210, 246) w. n. res. to mod. res. to term. *R. lucf.* (154) w. mod. res. to res. to term. *R. flav.* (201)	heart. dur. (T + F) (227, 234) w. n. dur. (T + F) (196, 227, 246) w. n. dur. (T) (183) w. n. dur. (115, 154)	w. mod. res. (T + L) (115, 154)		UP p. & TO pres.: heart. extr. res. (154, 186), sap. mod. res. (186) NP3 p. & TO & OS pres.: heart. extr. res. (154)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: A1, B2, C2c, C3, D2 other countries: D2, D9, D11, D15, D19, E1, F2, F7 possible: B2, C3a, D11, D15, D19, E1, F7	52, 57, 71, 75, 115, 138, 154, 183, 186, 196, 201, 210, 227, 234, 243, 246
A						
B						
C						
D						
E						

Khaya nyasica Stapf. — UMBAUA

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
			heart. res. to ve. res. to lyct. (12) sap. n. res. to lyct. (12)	heart. dur. (T + F) (218) heart. mod. dur. (T + F) (41, 205, 246)			UP p. & TO pres.: heart. extr. res. (12, 42, 186), sap. mod. res. (42, 182) NP3 p. & TO pres.: heart. extr. res. (42)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'					common: B2, D2, D8, D11, D15b, D19c, F2 possible: C3, C7, D10, D15	12, 41, 42, 182, 186, 205, 218, 246
A	Sp. NP3; con. (246)	TO1, WBa7, & WBa11 pres. (246)	res. to term. ≤ 91 ms, > 43 ms, ≤ 43 ms, & < 43 ms for con. (246)			
B						
C						
D						
E						

Klainedoxa gabonensis Pierre — EVEUSS

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of logs to amb. bee. att.: low (69, 92, 166)	br. & wh. rots: heart. res. (92) w. res. (99, 151) w. n. res. to mod. res. (57)	w. ve. res. to term. (92, 99) w. res. to ve. res. to term. (57) heart. ve. res. to lyct. (57, 99)	w. ve. dur. (T) (92) heart. ve. dur. (T + F) (246) w. ve. dur. (100) w. dur. (45, 69)	w. peris. (92) w. n. res. (139)	serv. cond. A, B, & E (99)	UP p.: w. res. (99, 100), sap. mod. res. (100)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A¹					common: Africa: A8 possible: A7, C3c, C6, C9, C10, D2, D19, E3, (W.T.) .	45, 57, 69, 92, 99, 100, 113, 139, 151, 166, 246
A						
B						
C						
D						
E						

Lophira alata Banks ex Gaertn. F. — AZOBÉ

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	(7)	(8)
	susc. of logs to amb. bee. att.: mod. (54, 243), low (86, 88)	br. & wh. rots: heart. res. to ve. res. (59, 154, 211), heart. res. (18, 59) w. ve. res. (58, 86, 151) w. res. (99)	w. ve. res. to term. (57, 58, 99, 211) w. res. to term. (86, 88, 151) w. res. to term. *C. havil.* (49) w. n. res. to mod. res. to term.: *R. flav.* (201), *R. lucf.* (154) w. res. to ve. res. to lyct. (52, 58, 99, 145, 211)	heart. ve. dur. (F) (37, 50, 88, 89, 138, 190) w. ve. dur. (27, 32, 45, 100, 103, 234) w. dur. (205) w. mod. dur. (T) (183) w. mod. dur. (T + F) (22)	w. res. to ve. res. (58, 151, 168, 205, 249) w. res. (L + T) (197) w. res. (M) (148) w. mod. res. (T + L) (3, 26, 112, 113, 115, 152, 154) w. n. res. to res. (T + B) (111, 184)	serv. cond. A & E (99)	UP p. & TO pres.: heart. extr. res. (86, 88, 153, 190), heart. res. (18), heart. mod. res. (154) UP p.: w. mod. res. (99, 100)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: A1, A2, A4, A7, A8, C4, E1 other countries: A1, A7, A8, B4, C2c, C4, C4b, D18b, D19b, E1	3, 18, 22, 26, 27, 32, 37, 45, 49, 50, 52, 54, 57, 58, 59, 86, 88, 89, 99, 100, 101, 103, 111, 112, 113, 115, 134, 138, 145, 148, 151, 152, 153, 154, 168, 182, 183, 184, 190, 197, 201, 205, 211, 234, 243, 249
A	Sp. NP3; con. (100) Sp. NP3; con. (100)	TO1 pres. (100) TO1 pres. (100)	life in gr. cont. in damp areas 6 yrs & 3.3 yrs for con. (100); life in gr. cont. in damp areas 7.6 yrs & 3.4 yrs for con. (100)			
B						
C						
D						
E						

Lovoa spp. — DIBÉTOU

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of logs to amb. bee. att.: ve. low to low (18, 86, 87, 88, 138, 151, 190, 238, 243) susc. of logs to ceramb. att.: ve. low to low (18, 56, 86, 87, 88, 151, 190, 238, 243)	br. & wh. rots: heart. mod. res. (18), heart. n. res. (92, 94) wh. rot: heart. n. res. (182) w. res. (56, 87, 211) w. mod. res. (86, 99, 151)	w. mod. res. to term. (86, 99, 151, 184, 190) w. mod. res. to term. *R. flav.* (92) w. n. res. to term.: *C. havil.* (49, 53), *R. flav.* (201) sap. n. res. to mod. res. to: lyct. (18, 57, 58, 86, 88, 92, 145, 151), bostr. (18, 58, 88, 151)	w. dur. (103, 110, 134) heart. mod. dur. (F) (37, 50, 88, 89, 190) w. mod. dur. (T + F) (196, 227, 229) w. mod. dur. (T) (92, 183) w. n. dur. to mod. dur. (T + F) (22) w. mod. dur. (27, 45, 234) heart n. dur. (T + F) (230)	w. n. res. (T) (113) w. peris. (T) (112) w. peris. (92)	serv. cond. A, B, & E (99, 103)	UP p. & TO pres.: heart. extr. res. (86, 88, 190, 214, 234), sap. mod. res. (86, 88) UP p.: w. extr. res. (56, 151, 153), w. res. (57, 99, 103) NP p.: heart. res. (41, 87, 211)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'				Note1: radio & television cabinets	common: D2, D11, D9, D9d, D2 (Note 1), B2, D9b, D15b, F5, F7 possible: B3, C1, C2, C3, C8	18, 22, 27, 32, 37, 41, 45, 49, 50, 53, 56, 57, 58, 86, 87, 88, 89, 92, 94, 99, 100, 101, 103, 110, 112, 113, 134, 138, 145, 151, 153, 182, 183, 184, 190, 196, 201, 211, 214, 227, 229, 230, 234, 238, 243
A	Sp. UP1, UP2; con. (100) posts treat. by NP2 p. (230)	WBb2 & TO1 pres. (100), OS5 pres. + (oil) (230)	life in gr. cont. in damp areas 3.2 yrs, 5.4 yrs, & 1.7 yrs for con. (100); no damage aft. 17 ms in gr. cont. (230)			
B						
C						
D						
E						

Maesopsis eminii Engl. — ESENGE

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	(7)	(8)
		br. & wh. rots: heart. n. res. (76, 212) w. n. res. (75)	w. n. res. to term. (75, 88, 138, 212, 214) sap. n. res. to mod. res. to bostr. & lyct. (88, 145, 214)	heart. dur. (F) (88) heart. n. dur. (F) (89) heart. n. dur. (T + F) (127, 227, 228, 229) heart. peris. (T + F) (41, 246)		serv. cond. A, B, C, & E (138)	UP p. & TO pres.: heart. perm. to mod. res. (42), heart. perm. (85, 145, 186, 212, 214, 225) NP3 & TO press.: heart. perm. (42, 141, 186, 225)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'					common: Africa: F2, C3c other countries: D15a, B3, D2, D9 possible: B3, D15, F2	41, 42, 75, 76, 85, 88, 89, 127, 128, 138, 141, 145, 186, 196, 212, 214, 218, 225, 227, 228, 229, 230, 246, 248
A	Sp. NP3; con. (246) Sp. NP5, & NP6; con. (127, 128)	TO1, WBa7, & WBa11 pres. (246), OS5 & OS6 pres. (127, 128)	res. to term. ≥ 97 ms, ≤ 37 ms, ≤ 37 ms, & ≤ 8 ms for con. (246); res. to fun. & term. > 27 ms & ≥ 17 ms for con. (127, 128)			
B						
C						
D						
E						

Mammea africana Sabine — OBOTO

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	(7)	(8)
	susc. of logs to amb. bee. att.: mod. to high (69)	br. & wh. rots: heart. ve. res. (74), heart. res. to ve. res. (93), heart. res. (193) w. res. (56, 57, 86, 151)	w. ve. res. to term. (99) w. mod. res. to term. (57, 86) w. res. to ve. res. to lyct. (57, 86, 99)	w. ve. dur. (99, 103) w. mod. dur. (45)		serv. cond. A & E (99)	UP p. & TO pres.: heart. extr. res. (18), heart. res. (86)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: D15a, D15c, B2, C3, C4, D2, E3c other countries: D9, D9b, D15	18, 45, 56, 69, 74, 86, 93, 99, 101, 103, 151, 193
A						
B						
C						
D						
E						

Mansonia altissima A. Chev. — BÉTÉ

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	(7)	(8)
	susc. of sap. to amb. bee. & ceramb. att.: low to mod. (18, 37, 86, 88, 138, 190, 212) susc. of logs to amb. bee. att.: mod. (236), low (238), ve. low (243) susc. of logs to platyp. att.: low to mod. (56, 134)	br. & wh. rots: heart. ve. res. (18, 76, 87, 212) wh. rot: heart n. res. (182) w. ve. res. (56, 86, 134) w. mod. res. (57, 99)	w. ve. res. to term. (57, 58, 99) w. ve. res. to term. *R. flav.* (201) w. res. to term. (212) heart. mod. res. to res. to term. (86, 134) w. mod. res. to term. (56, 88, 190) heart. res. to ve. res. to lyct. (57, 58, 99)	heart. ve. dur. (F) (37, 50, 88, 89, 138, 190) w. ve. dur. (45, 110, 153, 234) w. mod. dur. to ve. dur. (T + F) (22) w. dur. (T) (183) w. dur. (103)	w. n. res. to mod. res. (L + T) (197)	serv. cond. A, B, & E (99, 103)	UP p. & TO pres.: heart. extr. res. (18, 88), sap. mod. res. (18), sap. perm. (88) UP p.: w. res. (57, 99, 103), w. mod. res. (153) NP p.: w. extr. res. (212), w. res. (87)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'				Note 1: piano & television cabinets	common: Africa: D9b, C9 other countries: D11, D9, D15, D2 (Note 1), D23, C3, B5, C1a, D9b, D19 possible: C3, C4	18, 22, 27, 32, 37, 45, 49, 50, 56, 57, 58, 76, 86, 87, 88, 99, 101, 103, 110, 134, 138, 153, 182, 183, 190, 197, 201, 212, 234, 236, 238, 243
A						
B						
C						
D						
E						

Microberlinia spp.						ZINGANA	
NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	(7)	(8)
		w. ve. res. (58) w. res. (56, 86, 134)	w. ve. res. to term. *R. flav.* (201) w. ve. res. to term. (58) w. res. to ve. res. to lyct. (58, 86) w. res. to ins. (56, 134)	w. mod. dur. (110)			

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: A8, C3 other countries: D2, D9, D18, F7, D22, D23, F5 possible: C3, C8, C9, D3, (skis)	56, 58, 86, 101, 110, 134, 138, 190, 201
A						
B						
C						
D						
E						

Millettia spp. — WENGÉ

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
		br. & wh. rots: heart. res. to ve. res. (94), w. ve. res. (56, 86, 134)	w. ve. res. to term. (41) w. res. to term. (56, 86, 134, 138) w. *n.* res. to mod. res. to term. *R. flav.* (201) heart. res. to ve. res. to bostr. & lyct. & sap. n, res. (12)	heart. ve. dur. (F) (190) heart. ve. dur. (T + F) (41, 218) heart. dur. (F) (138) w. mod. dur. (205)		treat. of sap. is neces. (205)	UP p. & TO pres.: heart. extr. res. (41, 42) NP3 p. & TO pres.: heart. extr. res. (42)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: D2 (solid) other countries: D19, D11, D9, F7, D2, A8, C2c, D15, D17, D21, D23, possible: A7, C2c, C3, C9, D23, D3 (skis)	12, 32, 41, 42, 56, 86, 94, 134, 138, 190, 201, 205, 218
A						
B						
C						
D						
E						

Mitragyna spp. — ABURA

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
susc. of logs to disc.: mod. to high (205)	susc. of logs to amb. bee. att.: low to mod. (18, 86, 88, 151, 190, 212), mod. (243), low (238)	br. & wh. rots: heart. n. res. (87, 182, 212) wh. rot: heart. n. res. (193) w. mod. res. (99) w. n. res. (58, 86, 151) w. peris. (57)	w. n. res. to term. (57, 86, 87, 99, 103, 212, 214) heart. n. res. to term. *C. havil.* (49, 53) w. n. res. to mod. res. to term. *R. flav.* (201) sap. n. res. to mod. res. to bostr. & lyct. (86, 88, 151, 214)	w. mod. dur. (103, 110) heart. n. dur. (F) (50, 88, 190) w. n. dur. (T) (88, 183) w. n. dur. (27, 45, 214, 234) heart. peris. (F) (37, 89) heart. peris. (T + F) (41) w. peris. (T + F) (228, 229)	w. n. res. (57, 86)	treat. of logs aft. fel. (58) serv. cond. A, B, C, & E (99) serv. cond. D in areas fav. to dry-w. term. (103)	UP p. & TO pres.: heart. mod. res. (86, 88, 186, 212, 214), heart. perm. (18, 41, 225, 234), sap. perm. (85, 86, 186, 212, 214) NP3 p. & TO pres.: heart. mod. res. (186), sap. perm. (186)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'				sap. slightly dist. from heart. (57, 138) good res. to acids (186)	common: Africa: B2, B3, B6, B5, B9, C3, D2, D19, D21, F8 other countries: D15, D16, D11, D19c, D23, D2, F2, F8, C3, B3, F7 possible: D1, D9a, F3	18, 22, 27, 37, 41, 45, 49, 50, 53, 57, 58, 85, 86, 87, 88, 89, 99, 101, 103, 110, 138, 145, 151, 182, 183, 186, 190, 193, 201, 205, 212, 214, 225, 228, 229, 234, 238, 243, 246
A						
B						
C						
D						
E						

Monopetalanthus spp. — ANDOUNG

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
susc. of logs to bl. st.: low to mod. (56, 134) susc. of logs to inc. dec.: mod. to high (56, 134)	susc. of logs. to scol. att.: mod. (56, 134)	w. n. res. (56, 57, 99, 134)	w. n. res. to mod. res. to dry-w. term. (103) w. n. res. to term. (57, 99) sap. n. res. to mod. res. to lyct. (56, 57, 58, 65, 134) heart. res. to ve. res. to lyct. (58, 99)	w. mod. dur. (103, 110)		serv. cond. A, B, C, & E (99) serv. cond. D in areas fav. to dry-w. term. (103)	UP p.: w. res. (103), w. mod. res. (99), sap. perm. (58)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'				sap. slightly dist. from heart. (57)	common: F2 possible: B3, D2, D9	56, 57, 58, 65, 99, 103, 110, 134, 155
A						
B						
C						
D	veneers treat. by NP2 p. & 3 hrs piling (65), green lumb. 27 & 54 mm thick treat. by NP2 p. & 1-3 weeks diff. (155)	WBc1 pres. (65), WBc1 + (OS1 2%), & WBc2 + (OS1 1%) pers. (155)	full protect. agst. lyct. (2% bor. ac. through.) (65); protect. agst. lyct. & molds for lumb. 27 mm (155)			
E						

Morus spp. — DIFOU

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
		w. ve. res. (57, 86, 99)	w. ve. res. to term. (57, 86, 99) w. res. to term. *C. havil.*(49) heart. res. to ve. res. to lyct. (99) w. res. to bostr. & lyct. (56, 92)	w. dur. to ve. dur. (110) w. dur. (T + F) (228, 229) w. dur. (T) (183) w. mod. dur. (T + F) (246)		serv. cond. A & E (99) serv. cond. A, B, C, & E (56)	UP p.: w. extr. res. (99, 214)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: C3, C9, D2, D15b, B2 other countries: D15, D19, D11, C8 possible: D9, D11, D15, D18, D23, C9, F2, F7	49, 56, 57, 86, 92, 99, 110, 183, 214, 227, 228, 229, 246, 248
A	Sp. NP3; con. (246)	TO1, WBa7, & WBa11 pres. (246)	res. to term. ≤ 72 ms, ≤ 72 ms, ≤ 43 ms & ≤ 40 ms for con. (246)			
B						
C						
D						
E						

Nauclea trillesii Merril — BILINGA

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of logs to amb. bee. att.: ve. high (141, 236, 243), mod. (238, 243), low (69, 86, 87, 88, 151, 212)	br. & wh. rots: heart. res. to ve. res. (18, 87, 94, 193), heart. res. (74, 76, 93, 212) wh. rot: heart. mod. res. to res. (182) w. ve. res.: (58, 86) w. res.: (56, 57, 99, 134)	w. ve. res. to term.: (99, 190) w. res. to term. (18, 56, 57, 86, 87, 88, 134, 151, 193, 212) heart. ve. res. to term. *C. havil.* (49, 53, 58) w. n. res. to mod. res. to *R. flav.* (201) w. res. to ve. res. to lyct. (56, 57, 99, 134)	heart. ve. dur. (F) (2, 50, 88) w. ve. dur. (27, 45, 103, 153, 205, 234) w. dur. (69, 100) w. mod. dur. (T) (22, 183)	w. ve. res. (111, 190) w. res. to ve. res. (L + T) (197, 249) w. res. (T) (58, 113) w. res. (18, 56, 87, 111, 134, 138) w. mod. res. (T) (112, 173) w. n. res. (T + B) (111, 184) w. n. res. (T + L + B) (26)		UP p. & TO pres.: w. res. (234), heart. mod. res. (18, 86, 88, 186, 190, 212), sap. perm. (18, 86, 88, 190) UP p.: w. mod. res. (56, 100, 151, 153) NP3 p. & TO pres.: sap. mod. res. (186)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A¹			life in gr. cont. in damp areas 6 yrs for con. (100)		common: Africa: A5a, A8, C4, C4a, E3 other countries: B2, B4, B8, C4, C9, D9, D19b, E3 possible: A6, A7, B7, C2	2, 18, 22, 26, 27, 45, 49, 50, 53, 56, 57, 58, 69, 74, 76, 86, 87, 88, 89, 93, 94, 99, 100, 101, 103, 111, 112, 113, 134, 138, 141, 145, 148, 151, 153, 173, 182, 183, 184, 186, 190, 193, 197, 201, 205, 212, 234, 236, 238, 243, 249
A	Sp. NP3; con. (100)	TO1 pres. (100)	life in gr. cont. in damp areas 6 yrs & 2.6 yrs for con. (100)			
B						
C						
D						
E	heart. sp. UP1 (148)	TO1 pres. (148)	aft. 38 m; in the waters of Durban Harbor (S. A.), 100% good cond. (148)			

Table pg. 106

Nesogordonia spp. — KOTIBÉ

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	(7)	(8)
	susc. of logs to amb. bee. att.: low to mod. (18, 86, 87, 88), low (141, 236, 238), ve. low (243)	br. & wh. rots: heart. mod. res. to res. (94), heart. n. res. to res. (154), heart. mod. res. (18, 87), heart. n. res. (76, 210) wh. rot: heart. n. res. (182)	w. res. to ve. res. to term. (56, 57, 86, 87, 88, 99, 134, 190) w. res. to term. *C. havil.* (49) w. n. res. to term. *R. lucf.* (154) w. res. to ve. res. to bostr. & lyct. (56, 57, 110, 134, 138) sap. n. res. to bostr. & lyct. (18, 86, 88) Note 1	heart. dur. (F) (89) w. dur. (103, 110) heart. mod. dur. (F) (50, 88, 190) w. mod. dur. (T) (183) w. mod. dur. (45, 234) heart. n. dur. to mod. dur. (T + F) (22, 246) w. n. dur. (27, 248)	w. mod. res. to res. (L + T) (197, 249) w. n. res. (T) (154) w. n. res. (115) w. peris. to n. res. (92)	serv. cond. A & E (99) serv. cond. A, B, & E (103)	UP p. & TO pres.: heart. res. (18, 86, 88, 138, 190, 234), heart. mod. res. (154), sap. mod. res. (18, 86, 88), sap. perm. (86, 138) UP p.: w. res. (56, 99, 103), w. mod. res. (134) NP p: w. res. (87, 154, 210)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]				Note 1: res. to bostr. & lyct. reported ve. variable (92)	common: Africa: B2, B7, C1a, C2a, C4, C5, C8, D2 possible: A1, A7, B2, D19a, D21, D23	18, 22, 27, 45, 49, 50, 55, 56, 57, 76, 86, 87, 88, 89, 92, 94, 99, 100, 101, 103, 110, 115, 134, 138, 141, 145, 154, 173, 182, 183, 190, 197, 210, 234, 236, 238, 243, 246, 248, 249
A	Sp. UP1; con. (100)	WBb2 pres. (100)	life in gr. cont. in Iv.-Cst. 3.8 yrs & 2 yrs for con. (100)			
B						
C						
D						
E						

Ocotea usambarensis Engl. — KIKENSI

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
		br. & wh. rots: heart. res. to ve. res. (76, 87, 212), heart. n. res. to mod. res. (94) w. res. (57)	w. res. to term. (57) w. n. res. to term. (41, 248) heart. res. to lyct. (41) sap. mod. res. to bostr. & lyct. (88, 246)	heart. ve. dur. (F) (88, 89) w. n. dur. (T + F) (41, 218, 246)	w. mod. res. (T + M + L + S) (169) w. n. res. (T + M + L) (168) w. n. res. (41)		UP p. & TO pres.: hear. extr. res. (41, 42, 87, 88, 186, 212, 225), sap. perm. (87, 88, 186, 212), sap. mod. res. (42) NP3 p. & TO pres.: heart. extr. res. (41, 42), sap. mod. res. (42), sap. perm. (186)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: D2, A8, D9, F5 other countries: D15, C9, D19, F3, D11, D2, B5, C3, F5, F8 possible: C1, D19	41, 42, 57, 76, 87, 88, 89, 94, 168, 169, 186, 212, 218, 225, 246, 248
A	Sp. NP3; con. (246)	TO1, WBa7, & WBa11 pres. (246)	res. to term. ≤ 90 ms, ≤ 84 ms, ≤ 20 ms, & ≤ 14 ms for con. (246)			
B						
C						
D						
E						

Olea hochstetteri Bak. — MUSHERAGI

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
		br. & wh. rots: hear. mod. res. (76, 87, 212)	w. res. to term. (190) w. res. to lyct. (145, 190)	heart. dur. (F) (190) heart. mod. dur. (F) (88, 89) heart. n. dur. (T + F) (41, 218, 246) w. peris. (248)	w. mod. res. to res. (T + M) (168) w. mod. res. to res. (T + M + L + S) (111, 169)		UP p. & TO pres.: heart. mod. res. (42, 186), sap. perm. (42, 186) NP3 p. & TO pres.: heart. mod. res. (42, 186), sap. perm. (42, 186)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: C1a, D9d, C8, A8 C2, C11, D23 other countries: D19, D2, C4, F5	41, 42, 76, 87, 88, 89, 111, 145, 168, 169, 186, 190, 212, 218, 246, 248
A						
B						
C						
D						
E						

Ongokea gore Engl. — ANGUEUK

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
susc. of sap. to bl. st.: mod. to high (56, 86, 134)	susc. of sap. to amb. bee. att.: low to mod. (92, 93, 166), high (69)	br. & wh. rots: heart. res. (92, 193), heart. mod. res. to res. (94), heart. n. res. to res. (93) w. ve. res. (86) w. res. (56, 57, 101, 134)	heart. res. to term. (56, 86, 93, 134) w. mod. res. to term. (92) w. res. to ve. res. to bostr. & lyct. (57, 92, 134) w. res. to anob. (93, 134)	w. mod. dur. (T) (92)	w. ve. res. (L + T) (111, 197) w. mod. res. (92)	serv. cond. A (56)	UP p.: heart. extr. res. (57, 86), sap. perm. (57, 86) NP3 p. & WBa3 pres.: w. extr. res. (157) DS3 p. & WBb pres. w. perm. (157)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: D15c other countries: A8, C4a possible: A4(W.T.), A5(W.T.), A8(W.T.), A7, C4a,(W.T.), C9, D9, D11, D15, D19, F7	56, 57, 69, 86, 92, 93, 94, 101, 111, 134, 151, 157, 166, 193, 197
A						
B						
C						
D						
E						

Oxystigma oxyphyllum J. Leonard — TCHITOLA

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of sap. to amb. bee. att.: ve. high (69), low to mod. (92)	br. & wh. rots: heart. mod res. (74, 193), heart. n. res. (92, 93) w. mod. res. (56, 99)	w. mod. res. to term. (92, 99) w. mod. res. to res. to term. *R. flav.* (201) sap. n. res. to mod. res. to bostr. & lyct. (56, 58, 110, 134, 190) heart. res. to ve. res. to lyct. (56, 99)	heart. dur. (F) (37, 138) w. dur. (T) (92) heart. n. dur. to dur. (F) (190) sap. n. dur. (110) sap. peris. (F) (190)	w. n. res. (92)	treat. of logs aft. fel. (58) serv. cond. A, B, & E (99) treat. of sap. under serv. cond. A, B, C, D, & E (58)	UP p.: w. mod. res. (99) NP3 p. & WBa3 pres.: w. extr. res. (157) DS3 p. & WBb pres.: w. res. (157)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]	green lumb. treat. by NP2 p.; con. (69)	OS4 pres. + powder cons. of WBa6 & bor. (69)	aft. 1 yr stor. under outside cond., heart. 100% sound but sap. of con. damaged by ins. aft. 6-9 ms (69)	wood noticeably gummy, in partic., the sap. (134, 138, 190)	common: Africa: C3, C4, F2 other countries: F2, F7, B3, D15 possible: C5, C6, C8, D2, D9	32, 37, 56, 58, 69, 74, 92, 93, 99, 110, 134, 138, 157, 190, 193, 201, 234
A						
B						
C						
D						
E						

Parinari spp. — SOUGUÉ

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
		br. & wh. rots: heart. n. res. to mod. res. (59, 94, 212) w. mod. res. (101, 151) w. n. res. (99)	w. ve. res. to term. (99) w. mod. res. to res. to term. *R. lucf.* (154) w. res. to ve. res. to lyct. (99)	heart. mod. dur. (F) (88) heart. n. dur. (F) (89) heart. n. dur. (T + F) (196, 218, 227) w. n. dur. (100, 154) heart. peris. (T + F) (41, 246)	w. ve.res. (214) w. mod. res. to ve. res. (T + M + L + S) (111, 169) w. res. (212) w. mod. res. to res. (T + B) (111, 184), (T + M) (168) w. mod. res. (L + T) (111, 154, 197) w. n. res. (116)	serv. cond. A, B, & E (99, 229) serv. cond. A, B, C, D, & E (41)	UP p. & TO pres.: heart. mod. res. (186, 214, 225, 229), heart. perm. (41, 42, 154) UP p.: heart. mod. res. (151), w. perm. (99, 100) NP3 p. & TO pres.: w. mod. res. (186, 212), w. perm. (41, 42, 154) NP3 p. & OS pres.: perm. (154)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: A1 (W. T.), A8, C4a possible: A7, B7, C4, D19, E3	41, 42, 59, 88, 89, 94, 99, 100, 101, 111, 116, 151, 154, 157, 168, 169, 184, 186, 196, 197, 212, 214, 218, 225, 227, 229, 246
A	Sp. NP3; con. (246)	TO1, WBa7, & WBa11 pres. (246)	res. to term. ≤ 97 ms, ≤ 37 ms, ≤ 30 ms, & ≤ 2 ms for con. (246)			
B						
C						
D						
E						

Pericopsis elata van Meeuwen — KOKRODUA

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of logs to amb. bee. att.: low to mod. (69, 86, 88, 93, 238)	br. & wh. rots: heart. res. to ve. res. (18, 193, 209), heart. res. (74, 93), heart. mod. res. to res. (59) wh. rot: heart. n. res. (182) w. ve. res. (58, 86, 99)	w. ve. res. to term. (18, 58, 99) w. res. to term. *C. havil.* (49) w. res. to term. *R. flav.* (201)	heart. ve. dur. (F) (37, 50, 88, 89, 138, 190) heart. ve. dur. (T + F) (41, 123, 218) w. ve. dur. (T) (196) w. ve. dur. (27, 45, 153, 173, 234) w. mod. dur. (T) (183)	w. res. to ve. res. (L + T) (197, 249) w. res. (37) w. mod. res. (T + B) (111) w. mod. res. (T) (103, 173, 209) w. n. res. (T + L + B) (26)		UP p. & TO pres.: heart. extr. res. (18, 41, 42, 86, 88, 166, 234) UP p.: w. extr. res. (99) NP3 p. & TO pres.: heart. extr. res. (186)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: B2, E1, D15b, D2, F7, C2c, B7, D19, C3c, D15, D11 possible: A1, A5, A6, A8, C8, C9, D23	18, 26, 27, 32, 37, 41, 42, 45, 49, 50, 58, 59, 69, 74, 86, 88, 89, 93, 99, 101, 103, 111, 112, 113, 123, 138, 153, 166, 173, 182, 183, 186, 190, 193, 196, 197, 201, 209, 218, 234, 238, 249
A						
B						
C						
D						
E						

Piptadenia buchananii Bak. — MAFAMUTI

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of logs to amb. bee. att. (223)		w. mod. res. to term. (214) w. mod. res. to bostr. & lyct. (214, 223)	w. mod. dur. (205) w. n. dur. (214) w. peris. (T + F) (41, 218, 227, 246)	w. n. res. to mod. res. (148) w. n. res. (T + M + L + S) (169) w. peris. to n. res. (T + M + L) (168)		UP p. & TO pres.: heart. extr. res. (41, 42, 186), sap. perm. (42, 186), heart. res. (214), sap. mod. res. (214) NP3 p. & TO pres.: heart. extr. res. (42, 186), sap. perm. (42, 186)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: D2, D15a, C3, D10, D11, D17, F2 possible: D15c, D2	41, 42, 148, 168, 169, 186, 205, 214, 218, 223, 227, 246, 248
A	Sp. NP3; con. (246)	TO1, WBa7, & WBa11 pres. (246)	res. to term. ≥ 91 ms, ≤ 43 ms, ≤ 43 ms & ≤4 ms for con. (246)			
B						
C						
D						
E						

Piptadeniastrum africanum Brenan — DABÉMA

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	(7)	(8)
	susc. of logs to amb. bee. att.: high (54, 238, 243), mod. to high (69, 88), mod. (88, 236), low to mod. (18, 86, 151)	br. & wh. rots: heart. res. (94), heart. mod. res. (18, 74) wh. rot: heart. n. res. (182), w. mod. res. (57, 86, 99, 151)	w. mod. res. to res. to term. (57, 58, 86, 88, 99, 138, 151, 212, 214, 246) heart. n. res. to term. *C. havil.* (49, 53) sap. n. res. to mod. res. to bostr. & lyct. (18, 86, 88, 151, 212, 214)	heart. ve. dur. (F) (138) w. dur. to ve. dur. (T + F) (22) heart. mod. dur. (F) (50, 88, 89, 190) heart. mod. dur. (T + F) (196, 227, 229, 230) w. mod. dur. (T) (183) w. mod. dur. (27, 45, 103, 214, 234)	w. res. to ve. res. (99) w. mod. res. (T + L + M) (148) w. n. res. (57) w. peris. to n. res. (L + T) (173, 197)	serv. cond. A, B, & E (99, 103)	UP p. & TO pres.: heart. res. (18, 86, 88, 186, 212, 214) sap. mod. res. (86, 88, 186, 212, 214) UP p.: w. mod. res. to res. (57, 99, 151) NP3 p.: heart. res. (186), sap. mod. res. (186)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: A1, A8, B2, C3, C4, D2, E3 other countries: B4, C2c, C3, E3, D19c	18, 22, 27, 45, 49, 50, 53, 54, 57, 58, 69, 74, 86, 88, 89, 94, 99, 100, 103, 127, 138, 148, 151, 173, 182, 183, 186, 190, 196, 197, 212, 214, 225, 227, 228, 229, 230, 234, 236, 238, 243, 246
A	Sp. NP3; con. (100), Sp. UP2 & NP3; con. (100), posts treat. by NP1 p. (127)	TO1 pres. (100), TO1 & TO1 pres. (100), TO1 pres. (127)	life in gr. cont. in damp areas 6 yrs & 1.5 yrs for con. (100); life 7 yrs, 3 yrs & 1 yr for con. (100); res. to term. ≥ 1 yr (127)			
B						
C						
D						
E	wood blocks made of heart. treat. by UP1 p. (74)	TO1 pres. (74)	aft imm. of 38 ms in Durban Harbour (S.A.), 100% good cond. (74)			

Podocarpus spp. — PODO

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	(7)	(8)
	susc. of logs to amb. bee. & ceramb. att.: low to mod. (57, 212)	br. & wh. rots: heart. n. res. (87) w. n. res. (57)	w. n. res. to mod. res. to anob. (145)	heart. n. dur. (F) (89, 190, 214) heart. n. dur. (T + F) (196) w. n. dur. (206, 250) w. peris. (T + F) (41, 218, 227, 246)	w. n. res. to mod. res. (T + M + L) 168)	serv. cond. A, B, C, & E (190, 248)	UP p. & TO pres.: heart. & sap. perm. (41, 42, 145, 214, 218, 248) UP p.: w. perm. (57, 87) NP3 p. & TO pres.: heart. & sap. perm. (41, 42, 214, 218)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: C3a, C9, D15, D19, F8 other countries: D2, D15, B3, D19, F2, C9, C7, B5, B4, D9, D11, D9b, D17, E1, A8 (W. T.)	41, 42, 57, 87, 89, 142, 145, 168, 170, 190, 196, 206, 212, 214, 218, 227, 228, 229, 246, 248, 250
A	Sp. NP3; con. (246) Sp. NP3 (228, 229)	TO1, WBa7, & WBa11 pres. (246), TO1 pres.: (228, 229)	res. to term. ≥ 95 ms, ≤ 40 ms, ≤ 25 ms & ≤ 1 m for con. (246); life in gr. cont. in Uganda > 12 yrs (228, 229)			
B						
C						
D						
E	Sp. UP1; con. (168)	WBb1 pres. (168)	slight att. by *Teredo*, *Martesia* & *Limnoria* aft. 28 ms (168)			

Poga oleosa Pierre — OVOGA

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
-	susc. of logs to amb. bee. att.: low to mod. (56, 86)	w. mod. res. (56, 86, 99)	w. n. res. to mod. res. to term. (56, 86, 99, 193) w. n. res. to dry-w. term. (101, 103) heart. res. to ve. res. to lyct. (56, 58, 99)	w. dur. (110) w. mod. dur. (100, 103)	w. peris. to n. res. (T + B) (184)	serv. cond. A, B, & E (99) serv. cond. D in areas fav. to dry-w. term. (103)	UP p.: w. res. (103), w. mod. res. (58, 99)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: B2 other countries: D9b, D15, F7 possible: C3, D11, D13, D15, F2	56, 58, 86, 99, 100, 101, 103, 110, 138, 184
A	Sp. UP1, UP2, & NP3; con. (100)	WB, TO1, & TO1 pres. (100)	life in gr. cont. in damp areas 2 yrs, > 10 yrs, 8 yrs & 1.2 yr for con. (100)			
B						
C						
D						
E						

Pterocarpus angolensis DC. — MUNINGA

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	(7)	(8)
	susc. of logs to amb. bee. att.: mod. to high (41, 206, 224)	br. & wh. rots: heart. res. to ve. res. (76, 212), heart. ve. res. (87)	w. ve. res. to term. (126) heart. res. to term. (205, 206) w. res. to term. (77, 88, 190, 246) sap. n. res. to mod. res. to bostr. & lyct. (12, 77, 88, 191, 205, 206, 212, 224, 246) heart. ve. res. to bostr. & lyct. (12)	heart. ve. dur. (F) (37, 88, 89) w. ve. dur. (205, 206) heart. dur. (F) (190) heart. dur. (T + F) (41, 128, 218) heart. mod. dur. (T + F) (246)	w. res. to ve. res. (L + T) (197) w. res. (T + L) (249) w. res. (T) (246) w. mod. res. (T) (41)	treat. of sap. in serv. cond. A, B, C, D, & E (205, 206)	UP p. & TO pres.: heart. res. (41, 42, 186), sap. mod. res. (41, 42, 186)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: D2, C3, C8, A1, B2, D21, D24, E1, F2 other countries: D2, D11, D15, D19, A8, B5, C2, C3, D7, D9, D23, E1, F2, F5, F7	12, 37, 41, 42, 57, 76, 77, 87, 88, 89, 126, 128, 153, 173, 186, 190, 191, 197, 205, 206, 212, 218, 224, 246, 249, 250
A	Sp. NP3; con. (246)	TO1, WBa7, & WBa11 pres. (246)	res. to term. ≥ 48 ms, ≥ 48 ms, ≥ 48 ms, & ≤ 36 ms for con. (246)			
B						
C						
D						
E						

Pterocarpus soyauxii Taub. — PADOUK

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
susc. of logs to disc. & inc. dec.: low (56, 134)	susc. of logs to amb. bee. att.: high (243), mod. to high (69), low (56, 58, 134)	br. & wh. rots: heart. res. to ve. res. (93, 193) w. ve. res. (56, 57, 58, 99) w. res. to ve. res. (86)	w. res. to ve. res. to term. (56, 57, 58, 86, 99, 134) heart. res. & sap. n. res. to term. *C. havil.* (49, 53) w. mod. res. to term. *R. flav.* (201) w. res. to lyct. & bostr. (56, 57, 86, 158) sap. n. res. to mod. res. to bostr. & lyct. (134)	heart. ve. dur. (F) (37, 89, 138, 190) w. ve. dur. (103, 110) w. dur. to ve. dur. (T + F) (22)	w. ve. res. (T) (112) w. res. to ve. res. (L + T) (99, 197, 249) w. res. (T) (113) w. mod. res. (T + B) (111, 184)	serv. cond. A & E (99)	UP p. & TO pres.: heart. extr. res. (234), heart. mod. res. (86) UP p.: w. perm. (57, 99) NP p.: w. res. (134)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: B3, B2, B7, C3, C7, C9, D2, D11, D24 other countries: B2, C1, C2, C8, D9, D18, D19, D22, D23, F7 possible: A1, A6, A7, A8, E3	22, 37, 49, 53, 56, 57, 58, 69, 86, 89, 93, 99, 101, 103, 110, 111, 112, 113, 134, 138, 145, 158, 173, 184, 190, 193, 197, 201, 234, 243, 249
A						
B						
C						
D						
E						

Pterygota spp. — KOTO

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	(7)	(8)
susc. of logs to disc., in partic., bl. st.: mod. to high (57, 190, 234)	susc. of logs to amb. bee. att.: mod. to high (88, 190, 234)	br. & wh. rots: heart. peris. (18)	w. n. res. to term. (88) sap. n. res to mod. res. to lyct. (18, 57, 88, 110, 190)	heart. n. dur. (F) (50, 88, 190) w. n. dur. (103, 214, 234) heart. peris. (F) (89) w. peris. to n. dur. (110)		treat. neces. aft. fel. & conv. (190) serv. cond. A, B, C, D, & E (57, 103, 105)	UP p. & TO pres.: heart. perm. (18, 42, 88, 186, 190, 214, 234) NP3 p. & TO pres.: heart. perm. (42, 186)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]	green lumb. treat. by Di2 p. (105)	WBc1 & WBc2 pres. reinf. OSi & WBa6 pres. (105)	protect. eff. for lumb. up to 54 mm thick agst. w.-bor. ins. & fun. (105)	sap. n. dist. from heart. (57)	common: C3, D15, F2, F7	18, 42, 50, 57, 88, 89, 103, 105, 110, 186, 190, 214, 234
A						
B						
C						
D						
E						

Pycnanthus angolensis Warb. — ILOMBA

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
susc. of logs to disc.: mod. to high (18, 56, 92, 134, 138, 151, 214) susc. of logs & lumb. to inc. dec.: high (56, 92, 134)	susc. of logs to amb. bee. att.: ve. high (236, 238, 243), high (69, 214), mod. (18, 56, 86, 88, 92, 151) susc. of logs to ceramb. att.: high (56, 86, 88, 92, 134, 151) susc. of logs to anob. att.: ve. high (30)	br. & wh. rots: heart. n. res. (92), heart. peris. (18) w. n. res. (86, 151) w. peris. (58, 99)	w. n. res. to term. (86, 88, 92, 151, 214) w. peris. to n. res. to term. *R. flav.* (201) sap. n. res. to lyct. (35, 56, 58, 86, 88, 92, 98, 103, 138, 151, 190, 214, 246) sap. n. res. to bostr. (35, 98, 103, 138, 151, 190, 214)	w. n. dur. (103) w. peris. (F) (37, 50, 88, 89, 190) heart. peris. to n. dur. (T + F) (22) w. peris. (27, 45, 153, 214, 234)	w. peris. to n. res. (92)	treat. of green logs & lumb. (58) treat. of logs (30) serv. cond. A, B, C, D, & E (56, 92, 99, 103) serv. cond. D agst. bostr. & lyct. (98, 105)	UP p.: w. perm. (18, 58, 86, 88, 99, 103, 153, 190, 225, 234) NP p.: w. perm. (138, 225)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]	Sp. NP2; con. (69)	OS4 pres. + powder cons. of WBa6 & bor. (69)	no att. during 1 yr of stor. & ins. att. during 9 ms for con. (69)		common: B3, D2, D4, D15, D16, F2, F7 possible: C3, D15c, F5, F6	18, 22, 27, 30, 32, 35, 37, 45, 50, 56, 58, 69, 86, 88, 89, 92, 98, 99, 100, 101, 103, 105, 134, 138, 151, 153, 155, 190, 201, 214, 225, 234, 236, 238, 243, 246
A	Sp. UP1, UP2, & NP3; con. (100)	WBb2, TO1, & TO1 pres. (100)	life in gr. cont. in damp areas 1.6 yr, > 10 yrs, 10 yrs & < 1 yr for con. (100)			
B						
C						
D	green bds. 27 mm thick treat. by Di2 p. & piles for diff. treat. by NP2 p. (105)	WBc1 + (WBa6) & WBc2 + (OS1) pres. for bds & OS4 pres. for piles for diff. (105)	bds. protect. through. agst. bostr. & lyct. & fun. (105)			
E						

Ricinodendron spp. — ESSESSANG

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	(7)	(8)
susc. of logs & lumb. to disc., in partic., to bl. st.: high to ve. high: (18, 57, 88, 92, 138, 151, 205, 214)	susc. of logs to amb. bee. att.: mod. to high (57, 223) susc. of logs to ceramb. att.: low (57) Note 1	br. & wh. rots: heart. n. res. (74), heart. peris. (18, 92, 94) w. n. res. (151) w. peris. (57, 99, 101)	w. peris. to term. (57, 92, 99, 103, 214) w. n. res. to lyct. (57, 92, 99, 101, 110, 214) sap. n. res. to lyct. (223)	w. n. dur. (45, 103, 110) heart. peris. (T + F) (41, 123, 218) w. peris. (T) (92) w. peris. (205, 214)	w. peris. (T + L) (115) w. peris. (57, 92)	treat. of logs aft. fel. (57) serv. cond. A, B, C, D, & E (99, 101, 103)	UP p.: w. perm. (18, 57, 99, 103, 214, 225, 234)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]	unbark. logs treat. by NP2 p.: con. (132)	Pent. M. 6 & Phenoxol pres. (132)	count 0 & 82 ins. holes on treat. logs & 107 ins. holes on con. (132)	sap. slightly dist. from heart. (88) Note 1: tunnels observed in the inside heart., probably cau. by platyp. on young living trees (71)	common: Africa: B3, D21, D24, C8, D7, D18 possible: D2, F2, F5	18, 41, 45, 57, 71, 74, 88, 92, 94, 99, 101, 103, 110, 115, 123, 132, 138, 151, 214, 218, 223, 225, 234
A						
B						
C						
D						
E						

Scottellia spp. — ODOKO

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of logs to amb. bee. att.: low to mod. (18, 88)	br. & wh. rots: heart. n. res. (18, 76, 87, 212)	w. n. res. to term. (87, 88, 212) sap. n. res. to mod. res. to lyct. (145)	w. dur. (234) heart. n. dur. (F) (88, 89) w. n. dur. (45)			UP p. & TO pres.: heart. mod. res. (87), heart. perm. (18, 88, 186, 212, 234) NP3 p. & TO pres.: heart. perm. (186), sap. mod. res. (87)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'					common: D23, D5, D8, D16, D19, D24, C8, F2 possible: C3, D2, D5, D15a, D19	18, 45, 76, 87, 88, 89, 145, 186, 212, 234
A						
B						
C						
D						
E						

Staudtia spp. — NIOVÉ

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	(7)	(8)
	susc. of sap. of logs to amb. bee. att.: low to mod. (58), mod. to high (69)	br. & wh. rots: heart. ve. res. (92), heart. res. to ve. res. (94) w. ve. res. (99, 134) w. res. (56, 57, 58, 86) sap. n. res. (56)	heart. res. to ve. res. to term. *C. havil.* (49, 53) heart. ve. res. to term. *R. flav.* (201) w. res. to ve. res. to term. *R. lucf.* (154) w. ve. res. to term. (57, 92, 99) sap. mod. res. to lyct. (57, 86, 134)	w. ve. dur. (103) w. mod. dur. (100, 115, 154) w. mod. dur. (T) (92) heart. mod. dur. (T + F) (22)	w. mod. res. (T + L) (115, 154) w. n. res. (92)	serv. cond. A & E (99)	UP p. & TO pres.: heart. res. (154) UP p.: w. extr. res. (57, 86, 99), sap. perm. (57, 86) NP3 p. & OS pres.: w. res. (154) NP3 p. & WBa3 pres.: w. extr. res. (157) DS3 p. & WBb pres.: w. mod. res. (157)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: B6, B7, C3, C4a, D15c, D19 other countries: D15, D19, A8, D11, F7 possible: A1, A7, B5, C4, C9, D2, D9, D22, F3	22, 49, 53, 56, 57, 58, 69, 86, 92, 94, 99, 100, 103, 115, 134, 138, 154, 157, 166, 201
A	Sp. UP1, UP2, & NP3; con. (100)	WB, TO1, & TO1 pres. (100)	life in gr. cont. in damp areas 4 yrs, 8 yrs, 3.4 yrs & 3.2 yrs for con. (100)			
B						
C						
D						
E						

Sterculia rhinopetala K. Schum. — WAWABIMA

NATURAL DURABILITY

GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of logs to amb. bee. att.: mod. (238, 243), low to mod. (86, 88)	br. & wh. rots: heart. n. res. (212) w. mod. res. (57, 86) w. n. res. (16)	w. res. to term. (86, 88) sap. res. to term. (16) sap. n. res. to mod. res. to bostr. & lyct. (16, 18, 88)	heart. mod. dur. (F) (50, 88, 89) w. mod. dur. (234) heart. n. dur. (F) (138) w. n. dur. (45)			UP p. & TO pres.: heart. extr. res. (18, 88, 186, 212, 234), sap. mod. res. (186) NP3 p. & TO pres.: heart. extr. res. (186), sap. mod. res. (186)

PRESERVATIVE TREATMENTS / SUPPLEMENTARY INFORMATION

EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: D2, C3 other countries: D15, C3, C7, F2, D2 possible: D15, D19b	16, 18, 45, 50, 57, 86, 88, 89, 138, 186, 212, 234, 238, 243
A						
B						
C						
D						
E						

Strombosia pustulata Oliv. — AFINA

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of logs to amb. bee. att.: mod. to high (69), ve. low (243)	br. & wh. rots: heart. res. (18), heart. res. (57) sap. mod. res. (57) w. res. (151)	heart. res. to term. (57) sap. mod. res. to term. (57) w. n. res. to mod. res. to bostr. & lyct. (245) w. res. (138)	heart. dur. (F) (138) heart. mod. dur. (T + F) (227) heart. n. dur. (T + F) (41, 218) w. n. dur. (248)	w. n. res. to mod. res. (L + T) (197) w. peris. to n. res. (T + B) (111, 184)		UP p. & TO pres.: heart. extr. res. (41, 42), sap. mod. res. (42) UP p.: heart. res. (57), sap. mod. res. (57) NP3 p. & TO pres.: heart. extr. res. (42), sap. mod. res. (42)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: Africa: A1, A4, A5, (W. T.), C3c, C4a other countries: A8, C4, D19 possible: B4, B7, C4, D19a	18, 41, 42, 46, 57, 69, 111, 138, 151, 184, 197, 218, 227, 243, 245, 248
A						
B						
C						
D						
E						

Tarrietia spp. — NIANGON

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
susc. of logs to inc. dec.: low (30)	susc. of logs to ceramb., bostr., & anob. att.: low to mod. (30) susc. of logs to amb. bee. att.: low to mod. (18, 88, 151), mod. to high (238) susc. of logs to scol. att.: ve. low (54)	br. & wh. rots: heart. mod. res. (18), heart. n. res. (212), heart. peris. (59) wh. rot: heart. mod. res. (182) w. mod. res. (57, 99, 151)	w. mod. res. to term. (99, 212) w. n. res. to mod. res. to dry-w. term. (103) w. n. res. to mod. res. to term. *R. flav.* (201) sap. n. res. to mod. res. to bostr. & lyct. (18, 51, 57, 88) heart. res. to ve. res. to lyct. (57, 99)	heart. dur. (F) (89) w. dur. (110) heart. mod. dur. (F) (37, 50, 88, 190) w. mod. dur. (27, 103, 153) w. n. dur. (T) (183)	w. n. res. (57)	treat. of logs aft. fel. (30) serv. cond. A, B, & E (99) serv. cond. D in areas fav. to dry-w. term. (103)	UP p. & TO pres.: heart. extr. res. (18, 88, 186, 190, 212), heart. mod. res. (18), sap. res. (88, 186) UP p.: w. extr. res. (151, 153), w. res. (103), w. mod. res. (57, 99) NP3 p. & TO pres.: heart. extr. res. (186), sap res. (186)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'					common: Africa: A1, A8 other countries: C9, B8, E1, A8, B1, B5, C3, D11, D15, D17, D19c, F7 possible: C3, C4	18, 27, 30, 32, 37, 45, 50, 51, 54, 58, 59, 88, 89, 99, 100, 101, 103, 110, 138, 151, 153, 182, 183, 186, 190, 201, 212, 238
A	Sp. UP1, UP2, & NP3; con. (100)	WBb2, TO1, & TO1 pres. (100)	life in gr. cont. in lv.-Cst. 1.3 yr, 7.1 yrs, 2.5 yrs & 1.4. yrs for con. (100)			
B						
C						
D						
E						

Terminalia ivorensis A. Chev. — FRAMIRÉ

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
susc. of logs to bl. st. & inc. dec.: low to mod. (56, 134)	susc. of logs to amb. bee. att.: high to ve. high (192, 238, 243), mod. to high (141), mod. (236), low to mod. (18, 56, 87, 88, 134, 138, 151, 190, 212) susc. of logs to ceramb. att.: low to mod. (88, 151, 212)	br. & wh. rots: heart. res. (76, 87, 212), heart. mod. res. (18) wh. rot: heart. mod. res. (182), w. res. (86, 151), w. mod. res. (56, 99), w. n. res. (57)	w. mod. res. to term. (99) w. n. res. to term. *C. havil.* (49, 53, 103) w. n. res. to term. (57, 151, 212) sap. peris. to term. *C. havil.* (53) sap. n. res. to mod. res. to: bostr. & lyct. (138, 151, 190), lyct. (57, 86, 87, 88)	w. ve. dur. (45) heart. dur. (F) (37, 88, 89) w. dur. (27, 110, 153, 234) heart. mod. dur. (F) (50) w. mod. dur. (T) (183) w. mod. dur. (T + F) (22) w. mod. dur. (103)	w. n. res. (L + T) (197) w. peris. to n. res. (57, 86)	serv. cond. A, B, & E (99) serv. cond. D in areas fav. to dry-w. term. (103)	UP p. & TO pres.: heart. extr. res. (18, 86, 88, 138, 186, 190, 212, sap. mod. res. (18, 86, 88, 186) UP p.: w. extr. res. (34, 87, 151, 153), w. mod. res. (56, 99, 103, 134) NP3 p. & TO pres.: heart. extr. res. (186), sap. mod. res. (186)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]					common: D15, D11, D19c, C9, F2, F7, D9, A1, A8, C3, D2, C1	18, 22, 27, 32, 34, 37, 45, 49, 50, 53, 56, 57, 58, 71, 76, 86, 87, 88, 89, 99, 100, 101, 103, 110, 134, 138, 141, 145, 151, 153, 182, 183, 186, 190, 192, 197, 212, 234, 236, 238, 243
A	Sp. NP3; con. (212), Sp. UP1, UP2, & NP3; con. (100)	TO1 pres. (212), WBb2, TO1, & TO1, pres. (100)	life in gr. cont. in damp areas 6 yrs & 2 yrs for con. (212); life in gr. cont. in damp areas 2.2 yrs, 8.3 yrs, 3.7 yrs & 2.4 yrs for con. (100)			
B						
C						
D						
E						

Terminalia superba Engl. & Diels — LIMBA

NATURAL DURABILITY

GREEN LOGS AND LUMBER — FIELD TESTS & LOGGING & CONVERSION

WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)
susc. of lumb. to inc. dec.: mod. (18, 30, 56, 92, 134) susc. of logs to disc.: low to mod. (205)	susc. of logs to amb. bee. att.: ve. high (87, 88, 212), high (18, 56, 92, 134, 151, 205, 236), ve. low to ve. high (243), mod. to high (141)

WOOD IN SERVICE (ROUND OR CONVERTED) — LABORATORY TESTS

WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)
br. & wh. rots: heart. n. res. (18, 74, 76, 87, 92, 94, 193, 212) wh. rot: heart. n. res. (182) w. n. res. (16, 99, 151)	heart. mod. res. to term. *C. havil.* (49, 53) w. n. res. to res. to term. *R. flav.* (201) w. n. res. to term. (18, 87, 92, 99, 151) sap. n. res. to lyct. (16, 18, 134, 145, 205, 224) sap. n. res. to bostr. & lyct. (12, 87, 88, 138, 151, 212, 245) w. n. res. to lyct. (30, 56, 92, 98, 99, 103, 110)

WOOD IN SERVICE (ROUND OR CONVERTED) — FIELD TESTS & PERFORMANCE IN SERVICE

FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)
w. mod. dur. (T) (92) heart. n. dur. (F) (37, 50, 88, 89, 138, 190) w. n. dur. (T) (88, 183) w. n. dur. (27, 45, 103, 110, 153, 234) heart. peris. (T + F) (22, 218)	w. peris. to n. res. (92)

EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
treat. of logs (92) treat. of lumb. aft. kiln drying (30) serv. cond. A, B, C, D, & E (92, 99, 103)	UP p. & TO pres.: heart. mod. res. (88, 219), sap. mod. res. (219), heart. perm. to res. (18) UP p.: w. mod. res. (151, 153), w. perm. (99, 103, 205, 234) NP3 p. & TO pres.: w. res. (87, 212) NP3 p. & WB pres.: w. mod. res. (87, 212)

PRESERVATIVE TREATMENTS

EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)
A'	green logs treat. by NP2 p. (84) green logs treat. by NP2 p.; con. (132)	OS pres. (OS1 + OS6 + phenol) in oil & water (84) Phenox. M. 25 & Phenox. L. 20 (132)	excellent protect agst. amb. bee. & disc.: (84) aft. 8 days, 21, 18 & 114 ins. holes (132)
A	Sp. UP1, UP2, & NP3; con. (100)	WBb2, TO1, & TO1 pres. (100)	life in gr. cont. in damp areas 2 yrs, 5 yrs, 2.5 yrs & < 1 yr for con. (100)
B			
C			
D	green bds. treat. by Di2 p. & piles for diff. treat. by NP2 p. (105)	WBc1 + (WBa6), & WBc2 + (OS1) for 2nd treat. (105)	protect. agst. lyct. & fun. for bds. up to 54 mm thick (105)
E			

SUPPLEMENTARY INFORMATION

REMARKS	USES	REFERENCES
sap. n. dist. from heart. (32)	common: Africa: C4a, D2, D9b, D15 other countries: B9, C3, C6, D9b, D14, D17, D19, F2, F7 possible: F5, F6	12, 16, 18, 22, 27, 30, 32, 37, 45, 49, 50, 53, 56, 58, 74, 76, 84, 87, 88, 89, 94, 98, 99, 100, 101, 103, 105, 110, 132, 134, 138, 140, 141, 145, 151, 153, 155, 166, 182, 183, 190, 193, 194, 201, 205, 212, 218, 219, 224, 234, 236, 238, 243, 245

Testulea gabonensis Pellegr. — IZOMBÉ

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	(7)	(8)
		w. ve. res. (56) w. mod. res. to res. (57, 58, 99, 101)	w. ve. res. to term. (56, 99, 101) w. res. to ve. res. to term. (57, 58) heart. res. to ve. res. to lyct. (56, 57, 58, 99)			serv. cond. A & E (99, 103)	UP p.: w. res. (103), w. mod. res. (99)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'				sap. slightly dist. from heart. (58)	common: Africa: D2, D15, D3 (skis) other countries: D19, D15, D21 possible: C9, B5, B9, C3, D2, D9, D12, D22, D23, F2, F7	56, 57, 58, 99, 101, 103, 110, 145
A						
B						
C						
D						
E						

Tripolchiton scleroxylon K. Schum. — OBECHE

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	(7)	(8)
susc. of sap. of logs to disc., in partic. to bl. st.: high to ve. high (18, 86, 87, 138, 151, 198) susc. of sap. to bl. st.: mod. (30, 56, 88, 198, 205, 212, 234)	susc. of logs to amb. bee. att.: mod. to ve. high (18, 86, 88, 196, 243), high (236), low to mod. (87, 192, 212, 238) Note 1	br. & wh. rots: heart. n. res. to mod. res. (76), heart. n. res. (18, 87, 212) wh. rot: heart. n. res. (182) w. n. res. (16, 57, 151) w. peris. (99)	heart. n. res. to term. *C. havil.* (49) w. n. res. to mod. res. to term. *R. flav.* (201) w. n. res. to term. (57, 86, 87, 88, 99, 151, 190, 212) w. n. res. to mod. res. to bostr. & lyct. (18, 30, 56, 86, 87, 88, 151, 190, 212), lyct. (16, 57, 98, 99, 110, 140, 145, 220, 223)	heart. n. dur. (F) (2, 37, 50, 86, 88, 89) w. n. dur. (27, 110, 205, 234) w. n. dur. (T) (183) heart. peris. (T + F) (22)	w. n. res. (57, 86)	treat. of logs agst. fun. & ins. (56, 57, 58, 86, 138) treat. of green lumb. agst. fun. (30, 56, 58, 138) serv. cond. A, B, C, D, & E (30, 56, 58, 138)	UP p. & TO pres.: heart. res. (18, 86, 88, 186, 190, 212), sap. perm. (18, 86, 88, 186, 212) UP p.: w. res. (57, 58, 151, 153), w. mod. res. (99, 103, 234) NP3 p. & TO pres.: heart. res. (138, 186), w. res. (57, 58), sap. perm. (186)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]	green lumb. treat. by NP2 p. (198), unbark. logs treat. by NP2 p.; con. (236), logs treat. by NP2 p.; con. (192)	WBa6 (2%) pres. (198), OS6 pres. + (oil) & OS6 pres. + (water + Ceromul M) (236), OS6 pres. (192)	good protect. agst. disc. (198), protect. agst. ins. for 3 ms (236), aft. 15 days, 3.2 & 8.6 ins. holes/square metre (192)	sap. n. dist. from heart. (57, 190) Note 1: standing trees damaged by amb. bee. (71, 151)	common: Africa: B2, C3c, C8, C9, D9, D24 other countries: D15, F2, B3, C9, D2, D9, D17, D21, D9b, F7	2, 16, 18, 27, 30, 32, 37, 45, 49, 50, 56, 57, 58, 67, 71, 76, 86, 87, 88, 89, 98, 99, 100, 101, 103, 105, 110, 138, 140, 145, 151, 153, 155, 182, 183, 186, 190, 192, 196, 198, 201, 205, 212, 220, 223, 234, 236, 238, 243, 245
A	Sp. UP1, UP2, & NP3; con. (100)	WBb2, TO1, & TO1, pres. (100)	life in gr. cont. in damp areas 2.1 yrs, 10 yrs, 3.2 yrs & 1 yr for con. (100)			
B						
C						
D	green lumb. 27 & 54 mm treat. by Di2 p.; 1-3 weeks diff. (57, 105) ply. treat. by NP2 p. (67)	WBc1 + (WBa6) & WBc2 + (OS1) pres. (57, 105), WBc1 pres. (67)	protect. agst. fun. & ins. through. (57, 105), protect. agst. lyct. through. (67)			
E						

Turraeanthus africana Pellegr. AVODIRÉ

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	(7)	(8)
	susc. of logs to amb. bee. att.: mod. (93, 134, 143, 212), low (141, 236, 238), ve. low (54)	br. & wh. rots: heart. n. res. to mod. res. (74), heart. n. res. (193), heart. peris. (18, 93, 212) wh. rot: heart. n. res. (182)	w. res. to term. *C. havil.* (49) w. mod. res. to term. (99)	w. dur. (T) (183) heart. mod. dur. (F) (89) heart. n. dur. (F) (37, 50, 88, 190) w. n. dur. (27, 45, 110, 153) heart. peris. (T + F) (227)	w. res. to ve. res. to mar. bor. (99)	serv. cond. A, B, C, & E (99)	UP p. & TO pres.: w. extr. res. (88, 186, 190, 212), sap. perm. (18, 88, 186, 212) UP p.: w. res. (99, 103) NP3 p. & TO pres.: heart. extr. res. (186), sap. perm. (186)

PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION		
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A[1]				sap. n. dist. from heart. (153)	common: F7, D2, D11, D15, D9, F5 possible: B3, B9, C3, F5	18, 27, 37, 45, 49, 50, 54, 58, 74, 87, 88, 89, 93, 99, 100, 101, 103, 110, 134, 138, 141, 143, 153, 182, 183, 186, 190, 193, 212, 227, 236, 238
A	Sp. UP1, UP2, & NP3; con. (100)	WBb2, TO1, & TO1 pres. (100)	life in gr. cont. in damp areas 2.1 yrs, 8 yrs, 4.3 yrs & < 2 yrs for con. (100)			
B						
C						
D						
E						

Conclusions

The primary aim of this work was to collect the available information on the natural durability and preservation of 100 tropical African woods. Among the 250 references consulted for this work, more than 125 were directly used for compilation of the data. Although most of the references were obtained from library searches, about 30 of the publications, which were of great value, were obtained directly from various research institutions that were aware of our work.

The technical information that was collected was classified with respect to the various aspects of natural durability and preservation in tropical countries. A reference classification was then chosen for each aspect so that the data could be expressed on the same comparative basis. The reference classifications that were chosen were developed in connection with tests carried out in the countries of origin or under conditions of exposure thought to be the most severe. Therefore, this technique for compilation of the data substantially attenuated the disparities in the original data.

Although detailed study of the charts would allow us to draw conclusions about each species of wood, that is beyond the scope of this work, and consequently, only general conclusions will be drawn.

For more than 90 of the 100 woods chosen for this study, technical information was gathered on wood resistance to fungal decay, on insects attacking wood in service, and on the amenability of wood to impregnation by preservatives. However, no data could be obtained on wood resistance to marine borers or on insects attacking wood before it is utilized for 20 and 30 of the woods, respectively. Likewise, no data could be obtained concerning the types of preservative treatments that had been used in practice or the susceptibility of green logs and lumber to wood-staining fungi for about 45 and 80 of the woods, respectively.

Blank spaces in the tables do not necessarily indicate good or poor properties of conservation or preservation. For instance, there may be no practical need to undertake any research work on that subject owing to the low availability of the species, its poor technological properties, or its allocation to specific uses that do not involve the consideration of its properties of conservation and preservation. Therefore, it is important to know the potential uses of a wood before undertaking any long-term research to determine its properties of conservation and preservation.

To determine the susceptibility of green logs and lumber to attacks by wood-staining fungi and insects, it is very difficult to carry out tests that can reproduce the overall range of conditions of exposure prevailing in practice, in particularly those occurring during logging operations. As a matter of fact, because of the various logging techniques and the multitude of biological and climatic factors involved, each logging operation should be considered separately, and consequently, should involve a multitude of tests.

For most species, the information on wood resistance to fungal decay and on the insects that attack wood in service can be used to obtain a fairly good assessment of the natural durability of the woods. However, one should remember that the laboratory tests were conducted mostly on brown- and white-rot fungi, and that it has now been established that soft-rot fungi can also be very active in tropical conditions (Fougerousse 1966b; Liese 1961). Although few laboratory tests have been carried out in the past on the resistance of wood to attacks by insects, some of the testing methods appear to be quite reliable, especially those for termites. Laboratory tests are able to provide a relative measure of the wood's resistance to attacks by insects, and provide an excellent basis for comparisons between species. A few problems are inherent in the field tests. Tests carried out in temperate areas do not reproduce very well the conditions of exposure prevailing in the countries of origin. Although some valuable field tests have been carried out in tropical countries, the test sites appear to have been most favourable to destruction by termites, and therefore do not reflect the wood's performance in areas particularly favourable to fungal decay. Finally, if field tests constitute the most suitable means for determining the natural durability of wood, they should be carried out in conjunction with laboratory tests in order to allocate a quantitative meaning to this latter type of test.

A peculiar aspect of natural durability is the wood's resistance to marine borers. The data clearly indicate that very few species are very resistant to marine borers, in particular when they are put in service in tropical seas. Natural durability allows only short-term uses because the serviceable life of even the most resistant species rarely exceeds 8 years. In addition, experimental results have been found to be dissimilar from one test site to another, even within tropical areas. Thus, the experimental results have a very restricted application.

Concerning the amenability of wood to impregnation by preservatives, the data show the response of most species to impregnation under pressure and to impregnation by the hot-and-cold open tank process. However, very little information is available regarding substitute methods for these processes when they are found unsuitable either for technical or economic reasons.

Finally, one can see from the tables (columns 9 to 12) that relatively little information has been collected on preservative treatments that have been practiced for improving the durability of wood. Most data refer to pressure-impregnation treatments and treatments in open tanks, for which the effectiveness of the treatments has been evaluated by testing treated specimens in the field. Further efforts could be made to obtain more unpublished information on this aspect, particularly from organizations established in Africa.

Among the preservative treatments that appear promising for the valorization of certain species that cannot be treated by conventional processes is the dip-diffusion treatment. This treatment has given excellent results in some countries, for instance, in Papua New Guinea where about 70% of the 68 hardwood species of this area were considered unsuited for commercial pressure impregnation at 14 kg/cm^2 (200 psi) (Tamblyn et al. 1970). On the other hand, the preservatives used are subject to leaching, and therefore, the practical application of this treatment is usually confined to service conditions C and D. Nevertheless, with improvement of the preservative permanence in the treated specimens, the dip-diffusion treatment could be applied on a far wider scale. If simple preservative treatments are to constitute a technological way to encourage a more efficient and greater use of tropical woods in tropical countries, these treatments must remain economical, even on a long-term basis. Otherwise, the appreciation of species of poor conservation will continue to suffer.

Abbreviations

abs.	absorption
aft.	after
agst.	against
amb.	ambrosia
anob.	anobiids
att.	attack
av.	avoid
bark.	barked
bds.	boards
bee.	beetles
bl. st.	blue stain
bor.	borax
bor. ac.	boric acid
bostr.	bostrychids
br.	brown
cau.	caused
ceramb.	cerambycids
con.	controls
conc.	concentration
cond.	conditions
cons.	consisting of
cont.	contact
conv.	conversion, converted
count.	one counted
crypt.	cryptids
C. havil.	*Cryptotermes havilandi*
dec.	decay
destr.	destroyed
diff.	diffusion
disc.	discolorations
dist.	distinct
dur.	durable
exces.	excessive
eff.	effective
extr.	extreme, extremely
fel.	felled, felling
fr.	fresh, freshly
fun.	fungi
gr.	ground
heart.	heartwood
hrs.-hr.	hours-hour
imm.	immersed, immersion
impr.	impregnated, impregnation
inc. dec.	incipient decay
incis.	incision
in partic.	in particular
ins.	insect
Iv.-Cst.	Ivory Coast
larg.	largely
log.	logging
lumb.	lumber
lyct.	lyctids
mar. bor.	marine borers
min.	minutes
mod.	moderate, moderately
ms.-m.	months-month
neces.	necessary
n.	non, not
oper.	operations
p.	process
pen.	penetration
pent.	pentoxane
perm.	permeable
peris.	perishable
phenox.	phenoxane
platyp.	platypodids
ply.	plywood
pres.	preservatives
protect.	protected, protection
rail. sl.	railway sleepers
recom.	recommended
reinf.	reinforced with
res.	resistant, resistance
R. flav.	*Reticulitermes flavipes*
R. lucf.	*Reticulitermes lucifugus*
sap.	sapwood
scol.	scolytids
seas.	seasoning

serv.	service	through.	throughout
S.A.	South Africa		
sp.	specimens	unbark.	unbarked
spr.	spraying		
stor.	storage	ve.	very
subt.	subterranean		
suff.	sufficient	w.	wood
susc.	susceptibility	w.-bor. ins.	wood-boring insects
term.	termites	wh.	white
thick.	thickness	W.T.	with preservative
tot.	total		treatment
treat.	treatment, treated	yrs.-yr.	years-year

Scientific Names of Described Species

NOTE: There are a greater number of scientific names than common names because of synonymy and because botanical species with very similar properties have been grouped under the same common name.

* Synonym.

Common Names of Described Species

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