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Natural Durability and Preservation of One Hundred
Tropical African Woods

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Natural Durability and Preservation of One Hundred Tropical African Woods

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Yves Fortin and Jean Poliquin



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The available technical information, both published and unpublished, on the natural durability and preservation of tropical African woods was collected and screened.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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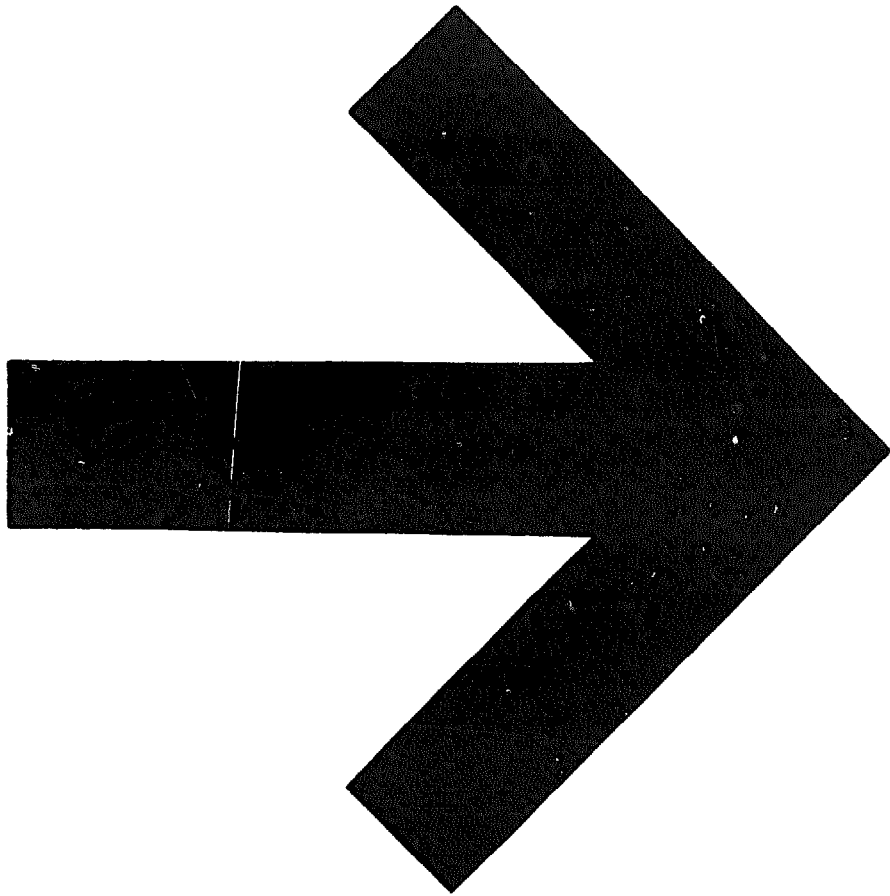
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**Natural Durability and Preservation
of One Hundred Tropical African Woods**

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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	3
Interpretation, comparison, and synthesis of the data	3
Method of presentation of the data	4
Conditions of exposure that require preservative treatment	9
Amenability to impregnation by preservatives	9
Preservative treatments	10
Supplementary information	12
One hundred tropical African woods	15
Conclusions	117
Abbreviations	119
Scientific names of described species	121
Common names of described species	123
Bibliography	124

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/ft ² (0.09 m ²)
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 artificially 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

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

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.

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 – *Limnoria*; 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 exposure¹ that require a preservative treatment were considered.

Before the Wood is Utilized (Service Condition A¹)

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 $5 \times 5 \times 110$ cm ($2 \times 2 \times 42$ 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/cm² (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 Fougrousse 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 to 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; Fougrouse 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 - Chlorinated 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; Fougrouse 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.

DOUSSIE

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	LABORATORY TESTS		FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
		WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)				
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. <i>havil.</i> (53) w. mod. res. to term. <i>R. lucif.</i> (202), term. <i>R. flav.</i> (201) sap. mod. res. to bostr. (12, 18), lyc. (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		PRESERVATIVE TREATMENTS		PRESERVATIVE EFFECTIVENESS (12)		SUPPLEMENTARY INFORMATION	
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)			REMARKS	USES	REFERENCES
A'						common:	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
A	Sp. NP3; con. (246)	TOI, WBa7, & WBa11 pres. (246)	res. to term. ≥ 43 ms, ≥ 91 ms, ≤ 40 ms, & ≤ 40 ms for con. (246)			other countries: F3, D15b, C4, C9, A7, B2, C7, D11, D19, E1, F5, F7	
B							
C							
D							
E							

***Albizia* spp.**

MUSASE

		NATURAL DURABILITY				AMENABILITY TO PRESERVATIVE IMPREGINATION	
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	
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 (140, 141, 236), mod. to high (69, 224, 238), low to mod. (88, 92, 93)	br. & wh. rotis: 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 bosir. & lyct. (18, 57, 88, 145, 151, 205, 209, 224)	heart. ve. res. to term. <i>C. havil.</i> (49, 53) sap. res. to term. <i>C. havil.</i> (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)
EXPOSURE CONDITIONS (9)		PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION	
	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES	
A ¹					common: Africa: C3, D2, D15	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. NIP3; con. (246)	TO1, WBa7, & WBa11 pres. (246)	res. to term. \geq 91 ms, \leq 85 ms, \leq 26 ms, & \leq 26 ms for con. (246)		other countries: D15, D2, C4, D19 possible: A1, A8, C1, C2, C3, C4, C9, D9, D11, D12, D15, D16, D21		
B							
C							
D							
E							

Alstonia spp.

EMIEN

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)		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.: 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. <i>Havili.</i> : (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. n. dur. (27, 153, 21+)	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. excess. 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 andongensis* Exell & Torre** **BANGA-WANGA**

NATURAL DURABILITY					EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (FOUND OR CONVERTED) 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						
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'					common: A8, D19	41, 42, 57, 123, 197, 218, 246
A						
B						
C						
D						
E						

Androstachys johnsonii Prain

MECRUSSÉ

NATURAL DURABILITY				SUPPLEMENTARY INFORMATION	
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)		EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		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. (L + T) (111, 197) res. (111,
PRESERVATIVE TREATMENTS			PRESERVATIVE EFFECTIVENESS		
EXPOSURE CONDITIONS (8)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES
A'					common: Africa: A8, D13
A					other countries: A3, A4, A5a, A8, C4a, E3
B					possible: C9, D15
C					
D					
E					
					12, 57, 111, 197, 205

Anigeria spp.

MUKALI

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)		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		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				SUPPLEMENTARY INFORMATION	
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)		EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		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. <i>C. havil.</i> (49, 56) w. mod. res. to lycl. (57, 101)	w. mod. dur. (100) w. n. dur. (50) heart. peris. to n. dur. (T + F) (22)	
PRESERVATIVE TREATMENTS		PRESERVATIVE EFFECTIVENESS (12)		REFERENCES	
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	REMARKS	USES	
A'				common: Africa: AB (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					

Antrocaryon spp.

ONZABILI

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)	
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)						
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. bce. 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								
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVE EFFECTIVENESS (12)				REMARKS	USES	REFERENCES
		WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)			
A'								16, 18, 45, 57, 92, 99, 101, 103, 105, 110, 151, 166
A								common: C8, D2 possible: B3, D11, D15, D17, F2, F5, F7 Note 1
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

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 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		PRESERVATIVE METHODS (10)		PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	REFERENCES
A'							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)	common: Africa: B2, D15 other countries: F2, F3, D15, D2, B2, D11, D22 possible: B3, C3, F7	
B							
C							
D							
E							

Autranella congolensis A. Chev.

MUKULUNGU

NATURAL DURABILITY

GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (6)
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. bec. 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		PRESERVATIVE TREATMENTS		PRESERVATIVE TREATMENTS		SUPPLEMENTARY INFORMATION	
EXPOSURE CONDITIONS (8)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES	
A'					common: Africa: A8	56, 57, 58, 86, 93, 94, 101, 110, 111, 112, 113, 138, 197	
A					other countries: B7, C2c, C4, D11, D15, D19, D23, E3, F3		
B					possible: A1, A6, A7, B5, B7,		
C					C4, D9, F2, F7		
D							
E							

Baikiaea plurijuga Harms

UMGUSI

NATURAL DURABILITY						SUPPLEMENTARY INFORMATION		
GREEN LOGS AND LUMBER		WOOD IN SERVICE (FOUND 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 ce- ramb. 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						REMARKS	REFERENCES	
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)		PRESERVATIVE EFFECTIVENESS (12)	USES			
A ¹						common: Africa: A8 (W.T.), C1, C2c, D2, A1	12, 18, 57, 76, 83, 87, 88, 89, 111, 190, 191, 197, 205, 210, 214, 246	
A						other countries: D19, C9		
B								
C								
D						possible: D2, D15, D19, F5		
E								

Berlinia spp.

EBIARA

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS	FIELD TESTS & PERFORMANCE IN SERVICE		MARINE BORERS (6)		
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)			
	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. <i>C. havil.</i> (49, 53) sap. n. res. to lyct. (57, 86, 88, 92, 151, 190, 210, 245) heart. res. to ve. res. to lyct. (57, 59)	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)
EXPOSURE CONDITIONS (9)		PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION	
IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES		
A'				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

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)	
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)		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 high (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								
EXPOSURE CONDITIONS (9)	PRESERVATIVE 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 & 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. \geq 37 ms, & \geq 37 ms (246)				
B							
C							
D							
E							

Brachystegia spp.

NAGA

NATURAL DURABILITY					
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)
PRESERVATIVE TREATMENTS					
EXPOSURE CONDITIONS (8)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)		PRESERVATIVE EFFECTIVENESS (12)	REMARKS
A'					
A					
B					
C					
D					
E					
SUPPLEMENTARY INFORMATION					
					REFERENCES
					37, 46, 56, 57, 86, 88, 110, 134, 138, 151, 153, 172, 186, 190, 197, 234, 245, 249
					USES
					common: D7, C3, D2, D9, D19, F2, F7 possible: B4, C1, D2, D15, F7
					AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
					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)
					EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)
					serv. cond. A, B, C, D, & E (56, 57)

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 & PERFORMANCE IN SERVICE			
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		MARINE BORERS			
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)			
	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'						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						SUPPLEMENTARY INFORMATION	
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		REFERENCES		
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)	USES
	susc. of logs to amb. bec. aft.; 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)		
EXPOSURE CONDITIONS (9)		PRESERVATIVE TREATMENTS		PRESERVATIVE EFFECTIVENESS (12)		REMARKS	REFERENCES
A'	IMPREGNATION METHODS (10)	PRESERVATIVES (11)					12, 41, 42, 46, 101, 111, 138, 169, 197, 205, 206, 218, 223
A						common:	
B						Africa:	
C						A8, C4a, A1, C2c, C4, C8, D2	
D						other countries:	
E						D19, D15	

Canarium schweinfurthii Engl.

AIELE

NATURAL DURABILITY					SUPPLEMENTARY INFORMATION			
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		REMARKS			USES	REFERENCES
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 par-tic., 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) (183) 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					PRESERVATIVE EFFECTIVENESS (12)			
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)		PRESERVATIVE EFFECTIVENESS (12)		REMARKS	USES	REFERENCES
A'	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)	TO, WBa7, & WBa11 pres. (246)		res. to term. \leq 91 ms, \leq 14 ms, \leq 16 ms, & \leq 1/2 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

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)					
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE		(6)	(8)
		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		PRESERVATIVE TREATMENTS		SUPPLEMENTARY INFORMATION			
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES	
A'					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 (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED) 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. 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'							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. \leq 43 ms, \leq 12 ms, \leq 91 ms, & \leq 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		AMENABILITY TO PRESERVATIVE IMPREGNATION						
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)			EXPOSURE CONDITIONS REQUIRING PRESERVATIVES		AMENABILITY TO PRESERVATIVE IMPREGNATION						
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS			MARINE BORERS		EXPOSURE CONDITIONS REQUIRING PRESERVATIVES						
WOOD-BORING INSECTS (BEFORE UTILIZATION)		WOOD-DESTROYING FUNGI		WOOD-BORING INSECTS (IN SERVICE)		FUNGI AND/OR INSECTS		FIELD TESTS & PERFORMANCE IN SERVICE					
WOOD-STAINING FUNGI (1)		WOOD-DESTROYING FUNGI (3)		WOOD-BORING INSECTS (IN SERVICE) (4)		FUNGI AND/OR INSECTS (5)		MARINE BORERS (6)					
susc. of logs to amb. disc.: mod. to high (18, 138, 190)		br. & w/h. rots: heart. peris. (18, 92, 94), w. peris. (56, 86, 99, 134, 138, 190)		w. peris. to n. res. to term. (99)		heart. n. dur. (F) (138)		w. mod. res. (115)					
susc. of logs to bl. st.: high to ve. high (56, 92)		susc. of logs to amb. bee. att.: mod. to high (18, 166, 223)		heart. mod. res. to lyct. (99)		w. n. dur. (T) (92)		w. n. res. (92)					
				w. n. res. to mod. res to bostr. & lyct. (56, 58, 86, 98, 103, 110, 134, 138)		w. n. dur. (45, 103)							
				sap. peris. to n. res. to lyct. (223)		w. peris. to dur. (110)							
						heart. peris. (F) (37, 190)							
						w. peris. (234)							
PRESERVATIVE TREATMENTS					SUPPLEMENTARY INFORMATION								
EXPOSURE CONDITIONS (9)		IMPREGNATION METHODS (10)		PRESERVATIVES (11)		PRESERVATIVE EFFECTIVENESS (12)		REMARKS		USES		REFERENCES	
A'								sap. ve. thick & n. dist. from heart. (190)		common:		18, 37, 45, 56, 58, 86, 92, 94, 98, 99, 101, 103, 105, 110, 115, 134, 138, 151, 155, 166, 190, 223, 234	
A										Africa: D2, D15, B3, D1, D2, D22, F2			
B										other countries: B3, F2, F7			
C										possible: C2, C3, D13 (violet), D18, F5			
D		green bds. 27 & 54 mm treat. by D12 p. (155), green bds. 27 & 54 mm treat. by D12 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							
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)	EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)		
	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 ce-ramb. 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, D15, 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

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)		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. bec. 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)	br. & wh. tots: 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. 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. <i>C. havil.</i> (49, 53) w. mod. res. to res. to term. <i>R. lucif.</i> (154, 202) w. mod. res. to term. <i>R. flav.</i> (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							
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)		PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
		WOOD-BORING INSECTS	WOOD-DESTROYING FUNGI				
A'	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. \geq 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

GREEN LOGS AND LUMBER FIELD TESTS & LOGGING & CONVERSION		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
		WOOD-BORING INSECTS (BEFORE UTILIZATION)		WOOD-BORING INSECTS (IN SERVICE)			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	susc. of logs to amb. bee. att.: mod. to high (69), low (92, 93)	br. & 1/2 h. rots: heart. mod. res. (92), heart. n. res. to mod. res. (74), heart. n. res. (93, 99) w. mmf. 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) 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)
EXPOSURE CONDITIONS (9)		PRESERVATIVE TREATMENTS			SUPPLEMENTARY INFORMATION		
	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES	
A'				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						SUPPLEMENTARY INFORMATION	
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)				EXPOSURE CONDITIONS (9)	REFERENCES
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)	EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
		w. n. res. (101) w. pertis. (99)	heart. n. res. to mod. res. to term. (99) w. pertis. 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							
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)		PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'					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 D12 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					
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)	EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (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'					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

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	LABORATORY TESTS		FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
		WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)				
		br. & wh. ve. res. (154)	w. res. to ve. res. to term. <i>R. flav.</i> (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							
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)		PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'						common: B1, D9, D19a	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)		possible: A8, C4, D11, D15a, D19	
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. <i>R. lucif.</i> (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)	
EXPOSURE CONDITIONS (9)		PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION			
IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS		USES		REFERENCES		
A'					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 Bail.

COULA

		NATURAL DURABILITY					EXPOSURE CONDITIONS REQUIRING PRESERVATIVES		AMENABILITY TO PRESERVATIVE IMPREGNATION	
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					EXPOSURE CONDITIONS REQUIRING PRESERVATIVES		AMENABILITY TO PRESERVATIVE IMPREGNATION	
FIELD TESTS & LOGGING & CONVERSION		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)	EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)		AMENABILITY TO PRESERVATIVE IMPREGNATION (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		PRESERVATIVE EFFECTIVENESS		SUPPLEMENTARY INFORMATION						
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES				
A'					common: Africa: A5b, C3	45, 57, 99, 101, 103, 111, 112, 113, 151, 184				
A					possible: A6, A8 (W.T.), C3, C9 D15, E1					
B										
C										
D										
E										

***Cylindrodiscus gabunensis* Harms** **OKAN**

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	LABORATORY TESTS		FUNGUS AND/OR INSECTS (5)	MARINE BORERS (6)		
		WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)				
	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. <i>C. havii</i> . (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 + <i>Chelura</i>) (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)
EXPOSURE CONDITIONS (9)		PRESERVATIVE TREATMENTS		PRESERVATIVE EFFECTIVENESS (12)		REMARKS	REFERENCES
A'	IMPREGNATION METHODS (10)	PRESERVATIVES (11)					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						common: Africa: A8, A1, C4a other countries: B7, C4, E1, D19 possible: C9, D2, D9, D19a	
B							
C							
D							
E							

***Cynometra alexandri* C. H. Wright**

ANGU

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)		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)
EXPOSURE CONDITIONS (9)		PRESERVATIVE TREATMENTS			SUPPLEMENTARY INFORMATION		
	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES	
A'					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

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)					
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE		MARINE BORERS (6)	
		WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	PERFORMANCE IN SERVICE		
	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. <i>R. flav.</i> (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)		UP p.: w. res. (57, 86, 99), w. mod. res. (58)
IMPREGNATION METHODS (10)		PRESERVATIVE TREATMENTS		PRESERVATIVE EFFECTIVENESS (12)		SUPPLEMENTARY INFORMATION	
EXPOSURE CONDITIONS (9)		PRESERVATIVES (11)		REMARKS	USES	REFERENCES	
A'						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)	sap. slightly dist. from heart. (57)	common: F7, F2, B1, D15, B5, D9b, D17, D19, D22 possible: C3		
B							
C							
D							
E							

Dacryodes spp.

SAFUKALA

NATURAL DURABILITY						EXPOSURE CONDITIONS		AMENABILITY TO PRESERVATIVE IMPREGNATION	
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		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)	EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)		AMENABILITY TO PRESERVATIVE IMPREGNATION (8)	
		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'						common: F7	57, 92, 103, 110, 115, 154		
A						possible: D15, F2, D19, F7, C3, A8 (W.T.)			
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 FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED) FIELD TESTS & PERFORMANCE IN SERVICE			MARINE BORERS (6)	PRESERVATIVE EFFECTIVENESS (12)			REMARKS	USES	REFERENCES
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)							
		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'								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

GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
WOOD-STAINING FUNGI (1)			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)	PRESERVATIVE TREATMENTS			PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
	IMPREGNATION METHODS (10)	PRESERVATIVES (11)					
A'	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

GREEN LOGS AND LUMBER FIELD TESTS & LOGGING & CONVERSION		NATURAL DURABILITY				EXPOSURE CONDITIONS (9)	SUPPLEMENTARY INFORMATION				
		WOOD IN SERVICE (ROUND OR CONVERTED)		FIELD TESTS & PERFORMANCE IN SERVICE			EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)	REMARKS	USES	REFERENCES
		WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)						
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 ce-ramb. 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. <i>C. havil.</i> (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		PRESERVATIVE EFFECTIVENESS (12)			PRESERVATIVE TREATMENTS			PRESERVATIVE TREATMENTS			
	IMPREGNATION METHODS (10)		PRESERVATIVES (11)								
A'											
A	Sp. UP1, UP2, & NP3; con. (100)	WB2, TO1, & TO1 pres. (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

GREEN LOGS AND LUMBER FIELD TESTS & LOGGING & CONVERSION		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
		WOOD IN SERVICE (ROUND OR CONVERTED)		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	LABORATORY TESTS		FUNGUS AND/OR INSECTS (5)	MARINE BORERS (6)		
		WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)				
	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				REFERENCES	
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES		
A'				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.

EYUOM

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)		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						SUPPLEMENTARY INFORMATION		
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)			
		br. & wh. 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						REMARKS	REFERENCES	
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)		PRESERVATIVE EFFECTIVENESS (12)	USES			
A'					sap. is mostly traded locally (41)	18, 27, 37, 41, 45, 86, 87, 88, 138, 153, 190, 201, 206, 218, 223, 225, 234, 250		
A						common: Africa: C8, C5, A5a, (W.T.), C2a other countries: D23, D21, D13, D18, D19, D24, D2, D5		
B								
C								
D								
E								

Distemonanthus benthamianus Baill.

MOVINGUI

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)		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), 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. <i>C. havil.</i> (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. (P) (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'				sap. slightly dist. from heart. (57, 138)	common: Africa: C3, D2, D15	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. UPI; con. (100)	WBb2 pres. (100)	life in gr. cont. in damp areas 3 yrs & 2.3 yrs for con. (100)	good res. to acids (134)	other countries: D19b, D11, D9, F3, C2c, C3, C9, D2, D15c, D23, F7		
B							
C							
D					possible: C1a, C2, C3, C9, D15 F2		
E							

Dumoria spp.

MAKORÉ

GREEN LOGS AND LUMBER FIELD TESTS & LOGGING & CONVERSION		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
		WOOD IN SERVICE (ROUND OR CONVERTED) FIELD TESTS & PERFORMANCE IN SERVICE					
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	LABORATORY TESTS		FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	treat. of green logs & lumbr. (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)
		WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)				
	susc. of logs to amb. bee. att.: mod. (243), low to mod. (18, 56, 86, 88, 151, 166) susc. of logs to ce- ramb. 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. <i>C. havil.</i> (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. & lycr. (18, 86, 88, 140, 151) w. res. to ve. res. to bostr. & lycr. (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)		
PRESERVATIVE TREATMENTS		PRESERVATIVE EFFECTIVENESS		SUPPLEMENTARY INFORMATION			
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES	
A'					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

GREEN LOGS AND LUMBER		NATURAL DURABILITY					EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)			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, 236), mod. (192, 238), low (27, 58, 69, 88, 93, 238), ve. low (243)	br. & wh. rotis: 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. <i>C. havil.</i> (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)	
EXPOSURE CONDITIONS (9)		PRESERVATIVE TREATMENTS			SUPPLEMENTARY INFORMATION			
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. desir. (229), life in gr. cont. in damp areas 4.6 yrs & 1 yr for con. (100)					
B								
C								
D								
E								

Entandrophragma candollei Harms

KOSIPO

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)		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)	br. & wh. rots: heart. mod. res. (18), w. mod. res. (57, 86, 99, 151)	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							
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	USES	REFERENCES
A'						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)			life in gr. cont. in Iv.-Cst. 2.3 yrs & 1 yr for con. (100)			
B							
C							
D							
E							

Entandrophragma cylindricum Sprague **SAPELLI**

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)		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 (L + T) (197)	(7)	(8)
	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. <i>C. havil.</i> (49) w. res. to term. <i>R. flav.</i> (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. pers. 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		PRESERVATIVE TREATMENTS		SUPPLEMENTARY INFORMATION			
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES	
A'					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. UPI; con. (100)	WB62 pres. (100)	life in gr. cont. in damp areas 2.4 yrs & 1.2 yr for con. (100)				
B							
C							
D							
E							

Entandrophragma uile Sprague

SIPO

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES		AMENABILITY TO PRESERVATIVE IMPREGNATION					
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES		AMENABILITY TO PRESERVATIVE IMPREGNATION					
WOOD-BORING INSECTS (BEFORE UTILIZATION)		WOOD-DESTROYING FUNGI		WOOD-BORING INSECTS (IN SERVICE)		FUNGUS AND/OR INSECTS		MARINE BORERS					
WOOD-STAINING FUNGI		WOOD-DESTROYING FUNGI		WOOD-BORING INSECTS (IN SERVICE)		FUNGUS AND/OR INSECTS		MARINE BORERS					
WOOD-BORING INSECTS (BEFORE UTILIZATION)		WOOD-DESTROYING FUNGI		WOOD-BORING INSECTS (IN SERVICE)		FUNGUS AND/OR INSECTS		MARINE BORERS					
(1)	susc. of logs to amb. bee. att.: high (243), mod. (236), low (86, 92, 93, 151, 190, 238)	(3)	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)	(4)	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. <i>C. havil.</i> (49), term. <i>R. flav.</i> (201), term. <i>R. lucif.</i> (92, 93) sap. n. res. to mod. res.: to lyct. (86, 88), to bostr. & lyct. (18, 151, 211, 214)	(5)	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)	(6)	w. n. res. (57, 86, 197) w. peris. to n. res. (92)	(7)	serv. cond. A, B, & E (99) serv. cond. D in areas fav. to dry-w. term. (103, 196)	(8)	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)
EXPOSURE CONDITIONS		IMPREGNATION METHODS		PRESERVATIVE TREATMENTS		PRESERVATIVE EFFECTIVENESS		REMARKS		USES		REFERENCES	
(9)		(10)		(11)		(12)		(13)		(14)		(15)	
A'													
A	Sp. NP3; con. (100)		TOI pres. (100)		life in gr. cont. in damp areas 5 yrs & 1 yr for con.: (100)						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
B													
C													
D													
E													

***Eribroma oblonga* Bod.**

EYONG

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

Erythrophleum spp.

TALI

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
		WOOD IN SERVICE (ROUND OR CONVERTED)		FIELD TESTS & PERFORMANCE IN SERVICE			
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		WOOD-BORING INSECTS (IN SERVICE)		WOOD-DESTROYING FUNGI (3)	
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, 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. <i>R. lucif.</i> (154, 193) heart. ve. res. to term. <i>C. havil.</i> (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		PRESERVATIVE METHODS (10)		PRESERVATIVES (11)		PRESERVATIVE EFFECTIVENESS (12)	
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)					REMARKS	REFERENCES
A'							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, WBar7, & WBal1 pres.: (246)		res. to term. ≥ 90 ms ≥ 97 ms, & ≤ 84 ms for con. (246)		common: Africa: A5b, A8, B7, C4, C9, F1 other countries: C4, E3, A8, D19, A7, B1, B7, C9, D15c possible: A1, A4, B4, F3	
B							
C							
D							
E							

Erythroxyllum mannii Oliv.

LANDA

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)		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)
EXPOSURE CONDITIONS (9)		PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION	
	IMPREGNATION METHODS (10)	PRESERVATIVES (11)		PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A ¹							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)		common: Africa: D15, D11 other countries: D2, D15b, F2, F5, F7 possible: C9, D15, D2, D9, C3, F7	
B							
C							
D							
E							

Fagara spp.

OLON

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
		WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)		WOOD-BORING INSECTS (IN SERVICE) (4)			
FIELD TESTS & LOGGING & CONVERSION		WOOD-DESTROYING FUNGI (3)		WOOD-BORING INSECTS (IN SERVICE) (4)		MARINE BORERS (6)	
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)	FIELD TESTS & PERFORMANCE IN SERVICE		
		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. pertis. (T) (184)		UP p.: w. res. (103), w. mod. res. (99)
PRESERVATIVE TREATMENTS							
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)		PRESERVATIVES (11)		PRESERVATIVE EFFECTIVENESS (12)	REMARKS	REFERENCES
	A'					sap. slightly dist. from heart. (86)	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)		common: F2, D9, D15, F7 possible: D2, F2, A1, A7, A7, D2, D23	
B							
C							
D							
E							

***Fagaropsis angolensis* Gardner**

MAFU

		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES		AMENABILITY TO PRESERVATIVE IMPREGNATION	
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		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)	EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)		AMENABILITY TO PRESERVATIVE IMPREGNATION (8)	
				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)	
EXPOSURE CONDITIONS (9)		PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION			
IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES				
A'						common: D2, D11, C3, C1b, D19 possible: D19, D14, D23, F5, F7			
A	Sp. NP3; con. (246)	res. to term. ≥ 43 ms, ≤ 4 ms & ≤ 2 weeks for con. (246)	TO1, WBa7, & WBal1 pres. (246)						
B									
C									
D									
E									

Gilbertiodendron dewevrei J. Leonard

LIMBALI

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)
		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. & WB6 pres.; w. mod. res. (157)
PRESERVATIVE TREATMENTS							
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)		PRESERVATIVES (11)		PRESERVATIVE EFFECTIVENESS (12)	SUPPLEMENTARY INFORMATION	
						REMARKS	USES
A'						susc. to heavy checking during seasoning (57)	57, 59, 93, 94, 126, 138, 157, 193, 198
A							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
B							
C							
D							
E							

Gossweilerodendron balsamiferum Harms **TOLA**

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)		WOOD-BORING INSECTS (IN SERVICE) (4)			
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. <i>R. lucif.</i> (154) heart. res. to term. (56, 86, 87, 92, 134) w. n. res. to mod. res. to term. <i>R. flav.</i> (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. persis. 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							
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES	
A'	green sp. NP2; con. (69)	OS4 pres. & powder cons. of WBab + 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

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)		MARINE BORERS			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	LABORATORY TESTS		FUNGUS AND/OR INSECTS (5)	(6)	(7)	(8)
		WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)				
	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)	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, 86, 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				REMARKS	REFERENCES
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	USES			
A'					often a substitute for <i>Khaya</i> 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 FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED) FIELD TESTS & PERFORMANCE IN SERVICE		EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)			
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							
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES	
					common: D2, D9, D11, D19, F7 possible: A1, A7, C3, D19, D23, F2	57, 94, 103, 110	

Guibourtia coleosperma J. Leonard

COPALIER

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (FOUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE		MARINE BORERS (6)	
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)			
		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							
EXPOSURE CONDITIONS (9)	PRESERVATIVE METHODS (10)		PRESERVATIVES (11)		PRESERVATIVE EFFECTIVENESS (12)	REMARKS	REFERENCES
	IMPREGNATION	CONVERSION	WOOD-BORING INSECTS	FUNGI			
A'							12, 57, 115, 123, 154, 190, 191, 205
A							common: Africa: A8, D19 other countries: A8, D9, D11, D15, F2, F5 possible: C1, D9, D11, D15, F7
B							
C							
D							
E							

Guibourtia spp.

BUBINGA

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) 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. bec. aft.: 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) ND3 p. & W/Bb3 pres.: w. sat. res. (157) DS3 p. & W/Bb 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		AMENABILITY TO PRESERVATIVE IMPREGNATION	
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		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)	EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)		AMENABILITY TO PRESERVATIVE IMPREGNATION (8)	
		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 term. to term. <i>R. lucif.</i> (145)	w. ve. dur. (212, 246, 248) heart. dur. to ve. dur. (T + F) (142, 190, 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		
						common:	41, 87, 111, 142, 145, 168, 169, 190, 196, 203, 212, 214, 218, 225, 227, 246, 248		
						Africa:	D8, D19, A4, A5a, D15, C3, C9, D2, F5, D15c		

Khaya spp.

ACAJOU d'Afrique

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)		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)	br. & wh. rots: heart. n. res. to mod. res. (18, 79, 87), heart. n. res. (76, 211), w. pe-ric to n. res. (172); wh. rot: heart. n. res. (182)	w. mod. res. to term. (57, 86, 99) w. mod. res. to term. <i>R. flav.</i> (201) heart. n. res. to term. <i>C. havil.</i> (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) locust. 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)	REMARKS	USES	REFERENCES	
A'	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)		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	
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							

***Khaya* spp.**

BISSILOM

NATURAL DURABILITY					EXPOSURE CONDITIONS REQUIRING PRESERVATIVES		AMENABILITY TO PRESERVATIVE IMPREGNATION	
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)			EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION	SUPPLEMENTARY INFORMATION	
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE			USES	REFERENCES
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)	UP p. & TO pres.: heart, extr. res. (154, 186), sap. mod. res. (186) NP3 p. & TO & OS pres.: heart. extr. res. (154)		
	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. <i>R. lucif.</i> (154) w. mod. res. to res. to term. <i>R. flav.</i> (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)			
PRESERVATIVE TREATMENTS					PRESERVATIVE EFFECTIVENESS		SUPPLEMENTARY INFORMATION	
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)		PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES	
A'						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						SUPPLEMENTARY INFORMATION	
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)		
			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						USES	REFERENCES
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)		PRESERVATIVE EFFECTIVENESS (12)			
A'							12, 41, 42, 182, 186, 205, 218, 246
A	Sp. NP3; con. (246)	TO1, WBa7, & WBa11 pres. (246)		res. to term. \leq 91 ms, $>$ 43 ms, \leq 43 ms, & $<$ 43 ms for con. (246)			common: B2, D2, D8, D11, D15b, D19c, F2 possible: C3, C7, D10, D15
B							
C							
D							
E							

***Klainedoxa gabonensis* Pierre**

EVEUSS

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 (69, 92, 166)	br. & wh. rois: 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. (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							
EXPOSURE CONDITIONS (9)	PRESERVATIVE METHODS (10)		PRESERVATIVES (11)		PRESERVATIVE EFFECTIVENESS (12)		REFERENCES
	IMPREGNATION METHODS				REMARKS	USES	
A'							45, 57, 69, 92, 99, 100, 113, 139, 151, 166, 246
A							common: Africa: A8 possible: A7, C3c, C6, C9, C10, D19, E3, (W.T.)
B							
C							
D							
E							

Lophira alata Banks ex Gaertn. F.

AZOBÉ

NATURAL DURABILITY						AMENABILITY TO PRESERVATIVE IMPREGNATION	
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE		EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	
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.: <i>R. flav.</i> (201), <i>R. lucif.</i> (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'					common: Africa: A1, A2, A4, A7, A8, C4, E1 other countries: A1, A7, A8, B4, C2c, 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)		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							

Loroea spp.

DIBÉTOU

GREEN LOGS AND LUMBER FIELD TESTS & LOGGING & CONVERSION		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	AMENABILITY TO PRESERVATIVE IMPREGNATION
		WOOD IN SERVICE (ROUND OR CONVERTED)		PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-BORING INSECTS (IN SERVICE)		MARINE BORERS		(7)	(8)
		WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (4)	FUNGI AND/OR INSECTS (5)	(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 ce-ramb. 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. <i>R. flav.</i> (92) w. n. res. to term.: <i>C. havil.</i> (49, 53), <i>R. flav.</i> (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		PRESERVATIVE EFFECTIVENESS		SUPPLEMENTARY INFORMATION		REFERENCES	
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES		
A'				Note: 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. 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.

ESENCE

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)	
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)		FIELD TESTS & PERFORMANCE IN SERVICE				
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	LABORATORY TESTS		FUNGUS AND/OR INSECTS (5)	MARINE BORERS (6)			
		WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)					
		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 pres.: heart. perm. (42, 141, 186, 225)	
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)		PRESERVATIVE TREATMENTS (11)		PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
	A'						common:	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. \geq 97 ms, \leq 37 ms, \leq 37 ms, & \leq 8 ms for con. (246); res. to fun. & term. $>$ 27 ms & \geq 17 ms for con. (127, 128)			other countries: D15a, B3, D2, D9 possible: B3, D15, F2	
	B							
	C							
	D							
E								

Mammea africana Sabine

OBOTO

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)	
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)		FIELD TESTS & PERFORMANCE IN SERVICE				
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	LABORATORY TESTS		FUNGUS AND/OR INSECTS (5)	MARINE BORERS (6)	serv. cond. A & E (99)	UP p. & TO pres.: heart, extr. (18), heart. res. (86)	
		WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)					WOOD-BORING INSECTS (74), heart. res. to ve. res. (93), heart. res. (193)
	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. ve. res. to term. (99)	w. ve. dur. (99, 103)				
		w. res. (56, 57, 86, 151)	w. mod. res. to term. (57, 86)	w. mod. dur. (45)				
			w. res. to ve. res. to lyct. (57, 86, 99)					
PRESERVATIVE TREATMENTS								
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVE TREATMENTS			PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
		IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)				
A'							common:	18, 45, 56, 69, 74, 86, 93, 99, 101, 103, 151, 193
A							Africa: D15a, D15c, B2, C3, C4, D2, E3c	
B							other countries: D9, D9b, D15	
C								
D								
E								

Mansonina altissima A. Chev.

BÉTÉ

GREEN LOGS AND LUMBER FIELD TESTS & LOGGING & CONVERSION		NATURAL DURABILITY 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 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

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)		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. (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		PRESERVATIVE TREATMENTS		SUPPLEMENTARY INFORMATION			
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES	
A ¹					common: Africa: A8, C3	56, 58, 86, 101, 110, 134, 138, 190, 201	
A					other countries: D2, D9, D18, F7, D22, D23, F5		
B					possible: C3, C8, C9, D3, (skis)		
C							
D							
E							

Milletia spp.

WENGÉ

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)		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. <i>R. flav.</i> (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'					common: Africa: D2 (solid)	12, 32, 41, 42, 56, 86, 94, 134, 138, 190, 201, 205, 218	
A					other countries: D19, D11, D9, F7, D2, A8, C2c, D15, D17, D21, D23,		
B					possible: A7, C2c, C3, C9, D23, D3 (skis)		
C							
D							
E							

Mitragyna spp.

ABURA

NATURAL DURABILITY					SUPPLEMENTARY INFORMATION					
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)			EXPOSURE CONDITIONS (9)	PRESERVATIVE TREATMENTS	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
FIELD TESTS & LOGGING & CONVERSION	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)						
	susc. of logs to amb. disc.: 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. <i>C. havil.</i> (49, 53) w. n. res. to mod. res. to term. <i>R. flav.</i> (201) sap. n. res. to mod. res. to bosir. & 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)			
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										

ANDOUNG

Monopetalanthus spp.

		NATURAL DURABILITY				SUPPLEMENTARY INFORMATION	
		WOOD IN SERVICE (ROUND OR CONVERTED)					
GREEN LOGS AND LUMBER		LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE		EXPOSURE CONDITIONS REQUIRING PRESERVATIVES	
WOOD-BURING INSECTS (BEFORE UTILIZATION)		WOOD-BORING INSECTS (IN SERVICE)		FUNGUS AND/OR INSECTS		AMENABILITY TO PRESERVATIVE IMPREGNATION	
WOOD-STAINING FUNGI (1)		WOOD-DESTROYING FUNGI (3)		MARINE BORERS (6)			
susc. of logs to bl. st.: low to mod. (56, 134)	susc. of logs to scol. at.: mod. (56, 134)	w. n. res. (56, 57, 99, 134)	w. n. res. to mod. res. to dry-w. term. (103)	w. mod. dur. (103, 110)		serv. cond. A, B, C, & E (99)	UP p.: w. res. (103), w. mod. res. (99), sap. perm. (58)
susc. of logs to inc. dec.: mod. to high (56, 134)		w. n. res. to term. (57, 99)	sap. n. res. to mod. res. to lyct. (56, 57, 58, 65, 134)			serv. cond. D in areas fav. to dry-w. term. (103)	
			heart. res. to ve. res. to lyct. (58, 99)				
EXPOSURE CONDITIONS (9)		PRESERVATIVE TREATMENTS		PRESERVATIVE EFFECTIVENESS (12)		REMARKS	
A'			PRESERVATIVES (11)				USES
A							common: F2
B							possible: B3, D2, D9
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							
							REFERENCES
						sap. slightly dist. from heart. (57)	56, 57, 58, 65, 99, 103, 110, 134, 155

Morus spp.

DIFOU

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)		
		WOOD IN SERVICE (ROUND OR CONVERTED)		FIELD TESTS & PERFORMANCE IN SERVICE					
FIELD TESTS & LOGGING & CONVERSION		LABORATORY TESTS		WOOD-BORING INSECTS (IN SERVICE)		MARINE BORERS			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-DESTROYING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)					
		w. ve. res. (57, 86, 99)	w. ve. res. to term. (57, 86, 99) w. res. to term. C. <i>havil.</i> (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'						common: Africa: C3, C9, D2, D15b, B2	49, 56, 57, 86, 92, 99, 110, 183, 214, 227, 228, 229, 246, 248		
A	Sp. NP3; con. (246)	TO1, WBar7, & WBall pres. (246)		res. to term. \leq 72 ms, \leq 43 ms & \leq 40 ms for con. (246)		other countries: D15, D19, D11, C8 possible: D9, D11, D15, D18, D23, C9, F2, F7			
B									
C									
D									
E									

Nauclea trillesii Merrill **BILINGUA**

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES		AMENABILITY TO PRESERVATIVE IMPREGNATION	
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)				MARINE BORERS		(8)	
WOOD-BORING INSECTS (BEFORE UTILIZATION)		WOOD-DESTROYING FUNGI		WOOD-BORING INSECTS (IN SERVICE)		FUNGI AND/OR INSECTS		(7)	
WOOD-STAINING FUNGI		WOOD-BORING INSECTS (BEFORE UTILIZATION)		WOOD-BORING INSECTS (IN SERVICE)		FUNGI AND/OR INSECTS		(6)	
(1)		(3)		(4)		(5)		(7)	
	susc. of logs to amb. bec. 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)	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.: <i>C. havil.</i> (49, 53, 58) w. n. res. to mod. res. to <i>R. flav.</i> (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)	
EXPOSURE CONDITIONS (9)		IMPREGNATION METHODS (10)		PRESERVATIVES (11)		PRESERVATIVE EFFECTIVENESS (12)		REMARKS	
A'					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, 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. UPI (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					SUPPLEMENTARY INFORMATION	
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)			EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (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. lucif. (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)	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. perim. (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'				Note 1: res. to bostr. & lyct. reported ve. variable (92)	common: Africa: B2, B7, C1a, C2a, C4, C5, C8, D2	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. UPI; con. (100)	WBb2 pres. (100)	life in gr. cont. in Iv.-Cst. 3.8 yrs & 2 yrs for con. (100)		possible: A1, A7, B2, D19a, D21, D23	
B						
C						
D						
E						

Ocotea usambarensis Engl.

KIKENSI

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	LABORATORY TESTS		FUNGUS AND/OR INSECTS (5)	MARINE BORERS (6)		
		WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)				
		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							
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)		PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'						common: Africa: D2, A8, D9, F5	41, 42, 57, 76, 87, 88, 89, 94, 168, 169, 186, 212, 218, 225, 246, 248
A	Sp. NP3; con. (246)	TOI, WBa7, & WBa11 pres. (246)		res. to term. \leq 90 ms, \leq 84 ms, \leq 20 ms, & \leq 14 ms for con. (246)		other countries: D15, C9, D19, F3, D11, D2, B5, C3, F5, F8 possible: C1, D19	
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		MARINE BORERS			
WOOD-BORING INSECTS (BEFORE UTILIZATION) (1)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)				
	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. petis. (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							
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES	
	A'				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						SUPPLEMENTARY INFORMATION						
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)				EXPOSURE CONDITIONS (9)	PRESERVATIVE TREATMENTS	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES	
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, 93), 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)	
A'										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 oxphyllum J. Leonard

TCHITOLA

NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER FIELD TESTS & LOGGING & CONVERSION (2)		WOOD IN SERVICE (ROUND OR CONVERTED) FIELD TESTS & PERFORMANCE IN SERVICE					
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)		
	susc. of sap. to amb. bec. 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. <i>R. flav.</i> (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'	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		AMENABILITY TO PRESERVATIVE IMPREGNATION	
GREEN LOGS AND LUMBER FIELD TESTS & LOGGING & CONVERSION		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)
	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. <i>R. lucif.</i> (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'					common:	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. \leq 97 ms, \leq 37 ms, \leq 30 ms, & \leq 2 ms for con. (246)		Africa: A1 (W. T.), A8, C4a possible: A7, B7, C4, D19, E3			
B								
C								
D								
E								

Pericopsis elata van Meeuwen

KOKRODUA

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)					
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	LABORATORY TESTS		FIELD TESTS & PERFORMANCE IN SERVICE		(6)	(7)
		WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGI AND/OR INSECTS (5)	MARINE BORERS		
	susc. of logs to amb. bec. 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. <i>havit.</i> (49) w. res. to term. R. <i>flav.</i> (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)
EXPOSURE CONDITIONS (9)		PRESERVATIVE TREATMENTS		PRESERVATIVE EFFECTIVENESS (12)		REMARKS	REFERENCES
IMPREGNATION METHODS (10)	PRESERVATIVES (11)						
A'							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							common: B2, E1, D15b, D2, F7, C2c, B7, D19, C3c, D15, D11 possible: A1, A5, A6, A8, C8, C9, D23
B							
C							
D							
E							

Piptadenia buchananii Bak.

MAFAMUTI

GREEN LOGS AND LUMBER		NATURAL DURABILITY						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
		WOOD IN SERVICE (ROUND OR CONVERTED)		FIELD TESTS & PERFORMANCE IN SERVICE		MARINE BORERS			
WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)		WOOD-DESTROYING FUNGI (3)		WOOD-BORING INSECTS (IN SERVICE) (4)		FUNGI AND/OR INSECTS (5)			
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)	
EXPOSURE CONDITIONS (9)		PRESERVATIVE TREATMENTS						SUPPLEMENTARY INFORMATION	
IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)		REMARKS	USES	REFERENCES			
A'					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. \geq 91 ms, \leq 43 ms, \leq 43 ms & \leq 4 ms for con. (246)				
B									
C									
D									
E									

Piptadeniastrum africanum Brenan

DABÉMA

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		WOOD-BORING INSECTS (IN SERVICE)		FUNGUS AND/OR INSECTS (5)			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)	FUNGUS AND/OR INSECTS (5)	MARINE BORERS (6)		
	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. <i>C. havil.</i> (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, 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							
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)		PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'						common:	18, 22, 27, 45, 49, 50, 53, 54, 57, 58, 69, 74, 86, 88, 89, 94, 99, 100, 103, 127, 138, 148,
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. \geq 1 yr (127)		Africa: A1, A8, B2, C3, C4, D2, E3 other countries: B4, C2c, C3, E3, D19c	151, 173, 182, 183, 186, 190, 196, 197, 212, 214, 225, 227, 228, 229, 230, 234, 236, 238, 243, 246
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

GREEN LOGS AND LUMBER FIELD TESTS & LOGGING & CONVERSION		NATURAL DURABILITY				AMENABILITY TO PRESERVATIVE IMPREGNATION
		WOOD IN SERVICE (ROUND OR CONVERTED)		FIELD TESTS & PERFORMANCE IN SERVICE		
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	LABORATORY TESTS		FUNGI AND/OR INSECTS (5)	MARINE BORERS (6)	EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)
		WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)			
	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)	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 (8)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'					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. \geq 95 ms, \leq 40 ms, \leq 25 ms & \leq 1 m for con. (246); life in gr. cont. in Uganda > 12 yrs (228, 229)			
B						
C						
D						
E	Sp. UPI; con. (168)	WBb1 pres. (168)	slight att. by <i>Teredo</i> , <i>Martesia</i> & <i>Limnoria</i> 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. bec. 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'						common: Africa: B2	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)		other countries: D9b, D15, F7 possible: C3, D11, D13, D15, F2	
B							
C							
D							
E							

Pterocarpus angolensis DC.

MUNINGA

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)		FIELD TESTS & PERFORMANCE IN SERVICE			
WOOD-STAINING FUNGI (1)	WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)	LABORATORY TESTS		FUNGUS AND/OR INSECTS (5)	MARINE BORERS (6)		
		WOOD-DESTROYING FUNGI (3)	WOOD-BORING INSECTS (IN SERVICE) (4)				
	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							
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)		PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'						common: Africa: D2, C3, C8, A1, B2, D21, D24, E1, F2	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. \geq 48 ms, \geq 48 ms, \leq 36 ms for con. (246)		other countries: D2, D11, D15, D19, A8, B5, C2, C3, D7, D9, D23, E1, F2, F5, F7	
B							
C							
D							
E							

Pterocarpus soyauxii Taub.

PADOUK

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 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. <i>C. havii</i> . (49, 53) w. mod. res. to term. <i>R. flav.</i> (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							
EXPOSURE CONDITIONS (9)	PRESERVATIVE METHODS (10)		PRESERVATIVES (11)		PRESERVATIVE EFFECTIVENESS (12)	REMARKS	REFERENCES
	IMPREGNATION METHODS (10)						
A'							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							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
B							
C							
D							
E							

Pterygota spp.

KOTO

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)		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 par-tic., bi. 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. (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)
EXPOSURE CONDITIONS (9)		PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION	
IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES		
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

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)						
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)		FIELD TESTS & PERFORMANCE IN SERVICE									
WOOD-BORING INSECTS (BEFORE UTILIZATION) (2)		WOOD-DESTROYING FUNGI (3)		WOOD-BORING INSECTS (IN SERVICE) (4)		FUNGUS AND/OR INSECTS (5)		MARINE BORERS (6)					
susc. of logs to amb. bee. att.: ve. high (236, 238, 243), high (69, 214), mod. (18, 56, 86, 88, 92, 151, 214)		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. <i>R. flav.</i> (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)	
susc. of logs to lumb. to inc. dec.: high (56, 92, 134)		susc. of logs to amb. att.: ve. high (30)											
EXPOSURE CONDITIONS (9)		IMPREGNATION METHODS (10)		PRESERVATIVE TREATMENTS		PRESERVATIVE EFFECTIVENESS (12)		REMARKS		USES		REFERENCES	
A'		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 D12 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

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES		AMENABILITY TO PRESERVATIVE IMPREGNATION	
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)		FIELD TESTS & PERFORMANCE IN SERVICE		EXPOSURE CONDITIONS REQUIRING PRESERVATIVES		AMENABILITY TO PRESERVATIVE IMPREGNATION	
WOOD-BORING INSECTS (BEFORE UTILIZATION)		WOOD-DESTROYING FUNGI		WOOD-BORING INSECTS (IN SERVICE)		FUNGI AND/OR INSECTS		MARINE BORERS	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
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 ce- ramb. 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)		
EXPOSURE CONDITIONS (9)		PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION			
(9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES			
A'	unbark. logs treat. by NP2 p.: con. (152)	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 pla- typ. on young li- ving 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

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)		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. bec. 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)
EXPOSURE CONDITIONS (9)		PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION	
	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							

Staudia spp.

NIOVE

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)		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)		
	stusc. 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. <i>C. havil.</i> (49, 53) heart. ve. res. to term. <i>R. flav.</i> (201) w. res. to ve. res. to term. <i>R. lucif.</i> (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)
EXPOSURE CONDITIONS (9)		PRESERVATIVE TREATMENTS (11)		PRESERVATIVE EFFECTIVENESS (12)		SUPPLEMENTARY INFORMATION	
IMPREGNATION METHODS (10)	PRESERVATIVES (11)	REMARKS		USES	REFERENCES		
A'						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						EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERTED)					
FIELD TESTS & LOGGING & CONVERSION	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. bec. 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'					common: Africa: D2, C3	16, 18, 45, 50, 57, 86, 88, 89, 138, 186, 212, 234, 238, 243	
A					other countries: D15, C3, C7, F2, D2		
B					possible: D15, D19b		
C							
D							
E							

***Strombosia pustulata* Oliv.**

AFINA

NATURAL DURABILITY						SUPPLEMENTARY INFORMATION	
GREEN LOGS AND LUMBER		WOOD IN SERVICE (ROUND OR CONVERT:D)				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. 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'						common: Africa: A1, A4, A5, (W. T.), C3c, C4a	18, 41, 42, 46, 57, 69, 111, 138, 151, 184, 197, 218, 227, 243, 245, 248
A						other countries: A8, C4, D19	
B						possible: B4, B7, C4, D19a	
C							
D							
E							

Tarrietia spp.

NIANGON

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)		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 cemb., bostr., & anob. att.: low to mod. (30)	br. & wh. rot: heart. mod. res. (18), heart. n. res. (212), heart. peris. (59)	w. mod. res. to term. (99, 212)	heart. dur. (F) (89)	w. n. res. (57)	treat. of logs aft. fel. (30)	UP p. & TO pres.: heart. extr. res. (18, 88, 186, 190, 212), heart. mod. res. (18), sap. res. (88, 186)
	susc. of logs to amb. bee. att.: low to mod. (18, 88, 151), mod. to high (238)	wh. rot: heart. mod. res. (182)	w. n. res. to mod. res. to term. <i>R. flav.</i> (201)	w. dur. (110)		serv. cond. A, B, & E (99)	UP p.: w. extr. res. (151, 153), w. res. (103), w. mod. res. (57, 99)
	susc. of logs to scol. att.: ve. low (54)	w. mod. res. (57, 99, 151)	sap. n. res. to mod. res. to bostr. & lyct. (18, 51, 57, 88)	heart. mod. dur. (F) (37, 50, 88, 190)		serv. cond. D in areas fav. to dry-w. term. (103)	NP3 p. & TO pres.: heart. extr. res. (186), sap. res. (186)
			heart. res. to ve. res. to lyct. (57, 99)	w. mod. dur. (27, 103, 153)			
				w. n. dur. (T) (183)			
PRESERVATIVE TREATMENTS		PRESERVATIVE TREATMENTS		PRESERVATIVE EFFECTIVENESS (12)		SUPPLEMENTARY INFORMATION	
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)		REMARKS	USES	REFERENCES	
A'					common: Africa: A1, A8	18, 27, 30, 32, 37, 45, 50, 51, 54, 58, 59, 88, 89, 99, 100, 101, 103, 110, 138, 151,	
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)	other countries: C9, B8, E1, A8, B1, B5, C3, D11, D15, D17, D19c, F7 possible: C3, C4	153, 182, 183, 186, 190, 201, 212, 238	
B							
C							
D							
E							

Terminalia ivorensis A. Chev.

FRAMIRÉ

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES		AMENABILITY TO PRESERVATIVE IMPREGNATION	
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (FOUND OR CONVERTED)				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES		AMENABILITY TO PRESERVATIVE IMPREGNATION	
WOOD-BORING INSECTS (BEFORE UTILIZATION)		WOOD-DESTROYING FUNGI		WOOD-BORING INSECTS (IN SERVICE)		FUNGI AND/OR INSECTS		MARINE BORERS	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
susc. of logs to amb. 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)	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. <i>havil.</i> (49, 53, 103) w. n. res. to term. (57, 151, 212) sap. peris. to term. C. <i>havil.</i> (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		PRESERVATIVE INFORMATION				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES		AMENABILITY TO PRESERVATIVE IMPREGNATION	
IMPREGNATION METHODS		PRESERVATIVES		PRESERVATIVE EFFECTIVENESS		EXPOSURE CONDITIONS REQUIRING PRESERVATIVES		AMENABILITY TO PRESERVATIVE IMPREGNATION	
(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
A'									
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

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES		AMENABILITY TO PRESERVATIVE IMPREGNATION	
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES		AMENABILITY TO PRESERVATIVE IMPREGNATION	
WOOD-BORING INSECTS (BEFORE UTILIZATION)		WOOD-DESTROYING FUNGI		WOOD-BORING INSECTS (IN SERVICE)		FUNGICIDAL/OR INSECTS		MARINE BORERS	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		
susc. of lumb. to inc. dec.: mod. (18, 30, 56, 92, 134)	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)	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. <i>C. havil.</i> (49, 53) w. n. res. to res. to term. <i>R. flav.</i> (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)	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. pertis. to n. res. (92)	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)		
EXPOSURE CONDITIONS		PRESERVATIVE TREATMENTS				SUPPLEMENTARY INFORMATION			
(9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES			
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)	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			
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 D12 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									

Testulea gabonensis Pellegr.

IZOMBÉ

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)		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. (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)
SUPPLEMENTARY INFORMATION							
PRESERVATIVE TREATMENTS				PRESERVATIVE EFFECTIVENESS			
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	56, 57, 58, 99, 101, 103, 110, 145
A						possible: C9, B5, B9, C3, D2, D9, D12, D22, D23, F2, F7	
B							
C							
D							
E							

Tripolchiton scleroxyton K. Schum.

OBECHE

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (FOUND OR CONVERTED)		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., in partic. to bl. st.: high to ve. high (18, 86, 87, 138, 151, 198)	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. rcs. (16, 57, 151) w. peris. (99)	heart. n. res. to term. <i>C. havil.</i> (49) w. n. res. to mod. res. to term. <i>R. flav.</i> (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							
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)		PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES
A'	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, D9, D24 other countries: D15, F2, B3, C9, D2, D9, D17, D21, D19, D20, 205, D18, 183, 186, 190, 192, 196, 198, 201, 205, 212, 220, 223, 234, 236, 238, 243, 245	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. UPI, 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

GREEN LOGS AND LUMBER		NATURAL DURABILITY				EXPOSURE CONDITIONS REQUIRING PRESERVATIVES (7)	AMENABILITY TO PRESERVATIVE IMPREGNATION (8)
FIELD TESTS & LOGGING & CONVERSION		WOOD IN SERVICE (ROUND OR CONVERTED)		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. (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. <i>havil.</i> (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 METHODS (10)		PRESERVATIVE TREATMENTS (11)		PRESERVATIVE EFFECTIVENESS (12)		SUPPLEMENTARY INFORMATION	
EXPOSURE CONDITIONS (9)	IMPREGNATION METHODS (10)	PRESERVATIVES (11)	PRESERVATIVE EFFECTIVENESS (12)	REMARKS	USES	REFERENCES	
A'				sap. n. dist. from heart. (153)	common: F7, D2, D11, D15, D9, 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, 4.3 yrs & < 2 yrs for con. (100)		possible: B3, B9, C3, F5		
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/cm² (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	imm.	immersed,
aft.	after		immersion
agst.	against	impr.	impregnated,
amb.	ambrosia		impregnation
anob.	anobiids	inc. dec.	incipient decay
att.	attack	incis.	incision
av.	avoid	in partic.	in particular
		ins.	insect
		Iv.-Cst.	Ivory Coast
bark.	barked		
bds.	boards	larg.	largely
bee.	beetles	log.	logging
bl. st.	blue stain	lumb.	lumber
bor.	borax	lyct.	lyctids
bor. ac.	boric acid		
bostr.	bostrychids	mar. bor.	marine
br.	brown		borers
		min.	minutes
cau.	caused	mod.	moderate,
ceramb.	cerambycids		moderately
con.	controls	ms.-m.	months-month
conc.	concentration		
cond.	conditions	neces.	necessary
cons.	consisting of	n.	non, not
cont.	contact		
conv.	conversion,	oper.	operations
	converted		
count.	one counted	p.	process
crypt.	cryptids	pen.	penetration
<i>C. havil.</i>	<i>Cryptotermes</i>	pent.	pentoxane
	<i>havilandi</i>	perm.	permeable
		peris.	perishable
dec.	decay	phenox.	phenoxane
detr.	destroyed	platyp.	platypodids
diff.	diffusion	ply.	plywood
disc.	discolorations	pres.	preservatives
dist.	distinct	protect.	protected,
dur.	durable		protection
exces.	excessive	rail. sl.	railway
eff.	effective		sleepers
extr.	extreme,	recom.	recommended
	extremely	reinf.	reinforced with
		res.	resistant,
			resistance
fel.	felled, felling	<i>R. flav.</i>	<i>Reticulitermes</i>
fr.	fresh, freshly		<i>flavipes</i>
fun.	fungi	<i>R. lucif.</i>	<i>Reticulitermes</i>
			<i>lucifugus</i>
gr.	ground		
		sap.	sapwood
heart.	heartwood	scol.	scolytids
hrs.-hr.	hours-hour	seas.	seasoning

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

Scientific Names of Described Species

<i>*Afrorosia elata</i>	97	<i>Chrysophyllum lacourtianum</i>	42
<i>Afzelia africana</i>	17	<i>Chrysophyllum subnudum</i>	42
<i>Afzelia bipinifensis</i>	17	<i>*Cistanthera papaverifera</i>	91
<i>Afzelia pachyloba</i>	17	<i>Coelocaryon preussii</i>	43
<i>Afzelia quanzensis</i>	17	<i>Combretodendron africanum</i>	44
<i>Afzelia</i> spp.	17	<i>*Copaifera coleosperma</i>	73
<i>Albizzia ferruginea</i>	18	<i>Cordyla africana</i>	45
<i>Albizzia versicolor</i>	18	<i>Corynanthe bequaertii</i>	46
<i>Alstonia boonei</i>	19	<i>Corynanthe paniculata</i>	46
<i>Alstonia congensis</i>	19	<i>Coula edulis</i>	47
<i>Alstonia gillettii</i>	19	<i>Cylicodiscus gabunensis</i>	48
<i>Amblygonocarpus andongensis</i>	20	<i>Cynometra alexandri</i>	49
<i>Androstachys johnsonii</i>	21		
<i>Aningeria altissima</i>	22	<i>Dacryodes buettneri</i>	50
<i>Aningeria superba</i>	22	<i>Dacryodes heterotricha</i>	51
<i>Anopyxis klaineana</i> =		<i>Dacryodes igaganda</i>	52
<i>Anopyxis ealeansis</i>	23	<i>Dacryodes pubescens</i>	51
<i>Antiaris africana</i>	24	<i>Dalbergia melanoxydon</i>	53
<i>Antiaris welwitschii</i>	24	<i>Daniellia klainei</i>	54
<i>Antrocaryon klaineianum</i>	25	<i>Daniellia ogea</i>	54
<i>Antrocaryon micraster</i>	25	<i>Daniellia thurifera</i>	54
<i>Antrocaryon nannanii</i>	25	<i>Daniellia</i> spp.	54
<i>Aucoumea klaineana</i>	26	<i>Desbordesia pierreana</i>	35
<i>Autranella congolensis</i>	27	<i>Desbordesia pierreana</i>	55
		<i>Desbordesia</i> spp.	55
		<i>Dialium</i> spp.	56
<i>Baillonea plurijuga</i>	28	<i>Diospyros atropurpurea</i>	57
<i>Baillonella toxisperma</i>	29	<i>Diospyros crassiflora</i> =	
<i>Berlinia bracteosa</i>	30	<i>Diospyros evila</i>	57
<i>Berlinia grandiflora</i>	30	<i>Diospyros</i> spp.	57
<i>Berlinia</i> spp.	30	<i>Distemonanthus benthamianus</i>	58
<i>Bombax buonopozense</i>	31	<i>Dumoria africana</i>	59
<i>Bombax flammeum</i>	31	<i>Dumoria heckelii</i>	59
<i>Brachylaena hutchinsii</i>	32		
<i>Brachystegia cynometroides</i>	33	<i>Entandrophragma angolense</i>	60
<i>Brachystegia eurycoma</i>	33	<i>Entandrophragma candollei</i>	61
<i>Brachystegia leonensis</i>	33	<i>Entandrophragma cylindricum</i>	62
<i>Brachystegia nigerica</i>	33	<i>Entandrophragma utile</i>	63
<i>Brachystegia spiciformis</i>	34	<i>Eriroma oblonga</i>	64
<i>Burkea africana</i>	35	<i>Erythrophleum guineense</i>	65
		<i>Erythrophleum ivorense</i>	65
		<i>Erythroxyllum mannii</i>	66
<i>Canarium schweinfurthii</i>	36	<i>Fagara heitzii</i>	67
<i>Carapa grandiflora</i>	37	<i>Fagara inaequalis</i>	67
<i>Carapa procera</i>	37	<i>Fagaropsis angolensis</i>	68
<i>Cassipourea elliotii</i>	38		
<i>Cassipourea</i> spp.	38	<i>Gilbertiodendron dewevrei</i>	69
<i>Ceiba pentandra</i> =		<i>Gossweilerodendron balsamiferum</i>	70
<i>Ceiba thoningii</i>	39	<i>Guarea cedrata</i>	71
<i>Celtis durandii</i>	40	<i>Guarea laurentii</i>	71
<i>Celtis mildbraedii</i>	40	<i>Guarea thompsonii</i>	71
<i>Celtis soyauxii</i>	40	<i>Guibourtia arnoldiana</i>	72
<i>Chlorophora excelsa</i>	41		
<i>Chlorophora regia</i>	41		
<i>Chrysophyllum africanum</i>	42		

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.

<i>Guibourtia coleosperma</i>	73	<i>Ongokea gore</i>	94
<i>Guibourtia demeusei</i>	74	<i>Oxystigma oxyphyllum</i>	95
<i>Guibourtia pellegriniana</i>	74		
<i>Guibourtia tessmannii</i>	74		
<i>*Irvingia oblonga</i>	55	<i>*Pachylobus büttneri</i>	50
		<i>*Pachylobus edulis</i>	52
		<i>*Pachylobus pubescens</i>	51
		<i>Parinari excelsa</i>	96
		<i>Parinari holstii</i> =	
<i>Juniperus procera</i>	75	<i>Parinari tenuifolia</i>	96
		<i>*Pausinystalia</i> spp.	46
<i>Khaya anthotheca</i>	76	<i>Pericopsis elata</i>	97
<i>Khaya grandifoliola</i>	77	<i>*Petersia africana</i>	44
<i>Khaya ivorensis</i> =		<i>Piptadenia b Buchananii</i>	98
<i>Khaya klainei</i>	76	<i>Piptadeniastrum africanum</i> =	
<i>Khaya nyasica</i>	78	<i>Piptadenia africana</i>	99
<i>Khaya senegalensis</i>	77	<i>Podocarpus gracilior</i>	100
<i>Klainedoxa gabonensis</i>	79	<i>Podocarpus usambarensis</i>	100
		<i>Podocarpus</i> spp.	100
<i>Lophira alata</i> =		<i>Poga oleosa</i>	101
<i>Lophira procera</i>	80	<i>Pterocarpus angolensis</i>	102
<i>Lovoa brownii</i>	81	<i>Pterocarpus soyauxii</i>	103
<i>Lovoa trichilioides</i> =		<i>*Pterygopodium oxyphyllum</i>	95
<i>Lovoa klaineana</i>	81	<i>Pterygota</i> spp.	104
		<i>Pycnanthus angolensis</i> =	
<i>*Macrolobium dewevrei</i>	69	<i>Pycnanthus kombo</i>	105
<i>Maesopsis eminii</i>	82		
<i>*Malacantha superba</i>	22	<i>Ricinodendron heudelotii</i> =	
<i>*Malacantha</i> spp.	22	<i>Ricinodendron africanum</i>	106
<i>Mammea africana</i>	83	<i>Ricinodendron rautanenii</i>	106
<i>Mansonia altissima</i>	84		
<i>Microberlinia bisulcata</i>	85		
<i>Microberlinia brazzavillensis</i>	85	<i>*Sarcocephalus diderrichii</i>	90
<i>Millettia laurentii</i>	86	<i>*Sarcocephalus xanthoxylon</i>	90
<i>Millettia stuhlmannii</i>	86	<i>Scottellia coriacea</i>	107
<i>*Mimusops congolensis</i>	27	<i>Scottellia</i> spp.	107
<i>*Mimusops djave</i>	29	<i>Staudtia gabonensis</i>	108
<i>*Mimusops heckelii</i>	59	<i>Staudtia kamerunensis</i>	108
<i>Mitragyna ciliata</i>	87	<i>Staudtia var. macrocarpa</i>	108
<i>Mitragyna stipulosa</i> =		<i>Staudtia stipitata</i> =	
<i>Mitragyna macrophylla</i>	87	<i>Staudtia gabonensis</i>	108
<i>Monopetalanthus heitzii</i>	88	<i>*Sterculia oblonga</i> =	
<i>Monopetalanthus letestui</i>	88	<i>Sterculia elegantiflora</i>	64
<i>Monopetalanthus pellegrini</i>	88	<i>Sterculia rhinopetala</i>	109
<i>Monopetalanthus</i> spp.	88	<i>Strombosia pustulata</i>	110
<i>Morus lactea</i>	89		
<i>Morus mesozugia</i>	89	<i>Tarrietia densiflora</i>	111
		<i>Tarrietia utilis</i>	111
<i>Nauclea trillesii</i>	90	<i>Terminalia ivorensis</i>	112
<i>Nesogordonia papaverifera</i>	91	<i>Terminalia superba</i>	113
<i>Nesogordonia</i> spp.	91	<i>Testulea gabonensis</i>	114
		<i>Triplochiton scleroxylon</i>	115
<i>Ocotea usambarensis</i>	92	<i>Turraeanthus africana</i>	116
<i>Olea hochstetteri</i>	93		

Common Names of Described Species

Abura	87	Landa	66
Acajou d'Afrique	76	Limba	113
Afina	110	Limbali	69
Aiélé	36	Longhi	42
Ako	24		
Alep	55	Mafamuti	98
Andoung	88	Mafu	68
Angu	49	Makoré	59
Angueuk	94	Mecrussé	21
Avodiré	116	Messassa	34
Azobé	80	Metondo	45
		Moabi	29
Banga-Wanga	20	Movingui	58
Bété	84	Muhuhu	32
Bilinga	90	Mukali	22
Bissilom	77	Mukarati	35
Blackwood, African	53	Mukulungu	27
Bodioa	23	Muninga	102
Bossé	71	Musase	18
Bubinga	74	Musheragi	93
		Mutenye	72
Cedar, African	75		
Copalier	73	Naga	33
Coufa	47	Niangon	111
Crabwood, African	37	Niové	108
Dabéma	99	Obeche	115
Dibétou	81	Oboto	83
Difou	89	Odoko	107
Doussié	17	Ohia	40
		Okan	48
Ebène	57	Okoumé	26
Ebiara	30	Olon	67
Ekoune	43	Onzabili	25
Emien	19	Ovoga	101
Esenge	82	Ozigo	50
Essessang	106		
Essia	44	Padouk	103
Eveuss	79	Pillarwood	38
Eyong	64	Podo	100
Eyoum	56		
		Safukala	51
Faro	54	Sapelli	62
Framiré	112	Sipo	63
Fromager	39	Sougué	96
Igaganda	52	Tali	65
Ilomba	105	Tchitola	95
Iroko	41	Tiam1	60
Izombé	114	Tola	70
		Tsanya	46
Kapokier	31	Umbaua	78
Kikensi	92	Umgusi	28
Kokrodua	97		
Kosipo	61	Wawabima	109
Kotibé	91	Wengé	86
Koto	104	Zingana	85

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