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## Use of the forestry collection held at Oxford University

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**USE OF THE FORESTRY COLLECTION  
HELD AT OXFORD UNIVERSITY**

**By**


**Sophie James, B.Sc.**

**A Master's Dissertation, submitted in partial  
fulfilment of the requirements for the award of  
Master of Arts degree of the  
Loughborough University of Technology**

**September 1995**

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## **ABSTRACT**

Use of the forestry collection was investigated using a multi-faceted methodology. The majority of use was from within the UK with postgraduates borrowing the most material and forming the largest group of users. A high proportion of visitors from outside Oxford were from universities which hold other important forestry collections.

Levels of periodical use were highest, followed by bulletins, and in-house use of both was greater than circulated use. 75 % of the book stock had been used in the last 20 months. Requests from external services were few compared with use from personal visits to the library.

Use by document delivery was for recent periodicals and a wider age range of bulletins, CABI's service requested more current periodicals than did CIFOR's. Book and periodical use was concentrated on items published during the last 20 years, whilst bulletin use was amongst items published during the last 30 years.

All readers found the material they required and the majority of demands to the external services were satisfied. Users agreed that the collection was unique and supply of the same material from elsewhere would be difficult.

It was recommended that the collection be preserved, acquisitions be maintained or increased and that it should remain open to visitors. A similar study should be continued to provide a more complete picture of use. If stock is to be put into storage it should be swiftly accessible. A scale of charges should be implemented by the Forestry Information Service.

## **ACKNOWLEDGEMENTS**

I would like to express my sincere thanks to Dr Paul Sturges for the guidance and encouragement he provided throughout the course of this dissertation.

I am also extremely grateful to the staff at the Plant Sciences and OFI Library, especially Mr Roger Mills, Mrs Michele Walker, Mrs Lucia Leeson, Ms Kate Knox and Ms Allison Bunney, for their co-operation and assistance throughout the survey, without which this research would not have been possible.

A special thanks goes to my fiancée, William Wilcox, for his love and support during a very hectic time !!

Thanks also to my parents, Keith and Anna James, for the frequent loan of the VW camper and to my fiancée's parents, Janet and Peter Wilcox, for the loan of their computing facilities !!



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## ABBREVIATIONS

BLLD	British Library Lending Division
CABI	Centre for Agriculture & Bioscience International
CIFOR	Centre for International Forestry Research
EC	European Community
FAO	Food and Agriculture Organisation
ILL	Inter-Library Loan
ITTO	International Tropical Timber Organisation
IUFRO	International Union of Forestry Research Organisations
NATO	North Atlantic Treaty Organisation
ODA	Overseas Development Administration
OFI	Oxford Forestry Institute
OLIS	Oxford Libraries Information System
OPAC	On-line Public Access Catalogue
UK	United Kingdom

# 1.0 INTRODUCTION

## 1.1 Forestry Information Provision

Forestry is a matter of major international concern at both governmental and intergovernmental levels and as such the need for improved access to forestry literature has been recognised at numerous conferences<sup>1</sup>. Issues raised by trees and forestry affect the lives of people world-wide. A contributor to the 10th World Forestry Conference noted that "in the industrialised countries, the supply of fibre from the forest is the basis of a large industry producing a wide range of products necessary for daily life. In other countries, fuelwood and materials for house-building will be the most important products in addition to food, shelter and new agricultural land"<sup>2</sup>. There is international concern with forestry and a corresponding need to provide adequate forestry information.

Forestry, like most agricultural research, is multi- and interdisciplinary and draws upon extensive areas in science and technology<sup>3</sup>. Areas of specialisation within forestry include forest ecology, silviculture, forest management, forest engineering, technology and uses of wood, and forest entomology. "Progress and specialisation in various research sectors has made a great mass of information available: the forester should have an encyclopaedic preparation that ranges from molecular structures to proteic markers used in genetics all the way to technological lasers used in wood production in sawmills"<sup>4</sup>.

To date there has been no comprehensive review of forestry information provision currently in place within the United Kingdom. Due to limitations of time, money and manpower it was not possible to carry out an in-depth investigation into this area within the parameters of this dissertation, but some indication of the current situation was gained by studying *The Aslib Directory of Current Information Sources in the United Kingdom*<sup>5</sup>. The information within



this directory was collected by questionnaire and therefore is only as accurate as the information volunteered. Forty-four institutions were identified as containing forestry material. These ranged from very narrow specialised collections, such as those held by the Agriculture Manpower Society which relate to health and safety, to the more comprehensive collections held by the Forestry Commission Library. Wide ranging forestry collections are held by the Universities of Edinburgh, Aberdeen, Cambridge and Bangor, but the Plant Sciences Library and Information Service collection is said to have a much wider geographic coverage<sup>6</sup>. However, it was apparent that of those institutions studied, access to the public is often restricted, or limited to members only, and that loan facilities and document delivery services are not commonly available. An attempt has been made to address that need through the Plant Sciences Library and Information Service held, within the Oxford Forestry Institute (OFI), at the University of Oxford. This comprises the Plant Science and OFI Library and the Centre for Agriculture and Bioscience International (CABI)-OFI Forestry Information Service.

## **1.2 The Plant Sciences Library and Information Service**

The Plant Sciences Library and Information Service, which is staffed by 3.5 professionals and 3.5 clerical staff together with the Head of Library Services and a trainee, provides a full range of library services for the Department of Plant Sciences, OFI and external visitors, and satisfies requests for information, by working in association with CABI in the acquisition and accessioning of literature.

### **1.2.1 The Library**

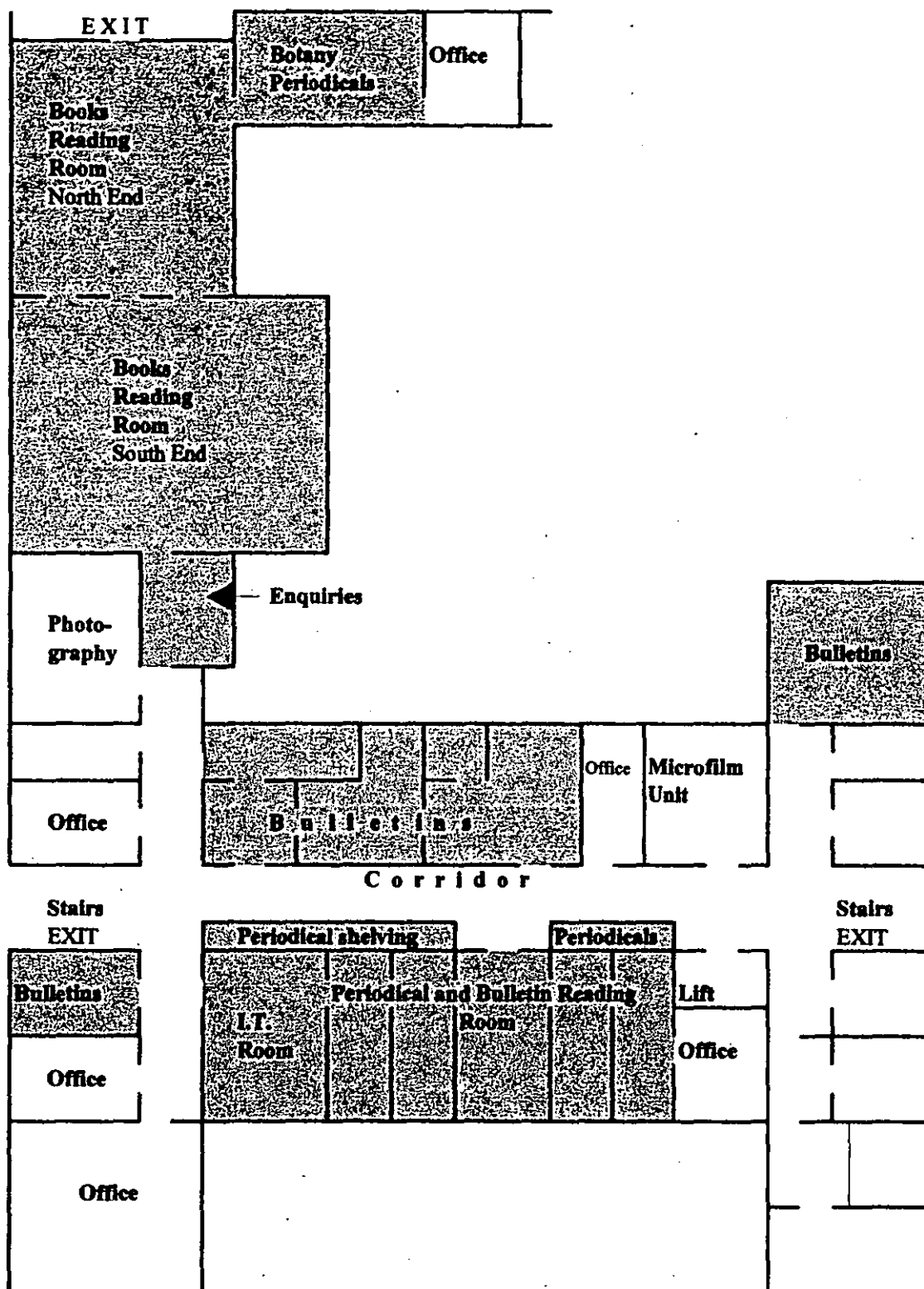
The Plant Sciences and OFI Library was formed from the formerly separate university departmental libraries of Agricultural Science, Botany and Forestry. These collections were merged, in 1988, on a single site which is based within

the Plant Sciences Department. The Library has a total stock of approximately 200,000 books and pamphlets (of which 20 % relate to forestry), 3700 reels of microfilm (of which the majority are older forestry material) and some 1800 current serials plus another 4000 non-current (of which the majority are forestry related)<sup>7</sup>. The serials have been treated as either periodicals or bulletins.

Periodicals are those items which have a regular publication schedule, contain several articles per issue and often commercially produced. Bulletins are generally research reports, appearing irregularly and often containing only one article per issue, and are usually produced by institutions. The collection has been arranged in terms of books, periodicals and bulletins (grey literature) (see Figure 1.1). The library collects current material in subject areas relevant to the teaching and research staff of the Department, and provides for the needs of undergraduates reading Biological Sciences, and for postgraduate students working towards research-based degrees or the taught MSc in Forestry.

The Library is open to both members of the University and members of the public. All departments are able to use the facilities within the library.

Members of the University are able to borrow all categories of materials from the Library, including periodicals and grey literature, whilst members of the public, although usually unable to borrow items, are able to make use of all other library facilities. Current figures for the number of readers with borrowing rights<sup>8</sup> show a total of 334 registered undergraduates of which 120 of these are final year students. A total of 120 postgraduate students are registered, of which 45 are MSc students, and the remaining 75 are composed of DPhil and research students. One-hundred-and-thirty-two University staff are members of the Library and 11 visitors have been granted full borrowing rights. Visitors are not normally given borrowing facilities but exceptions are occasionally made for long term external users who are based locally. The library is open from 9.00 am to 5.30 pm during week days and is closed at weekends.



**Figure 1.1** Plan of Plant Sciences and OFI Library showing stock locations. Shading denotes public areas.

### **1.2.2 The Information Service**

The CABI-OFI Forestry Information Service is based on the Library's forestry collection, which has an internationally renowned reputation, and is particularly strong in tropical material. In a report by Maurice B. Line, on the library, he stated that the collection is "one of the best forestry collections in the world (if not the best), with the potential to provide a world-wide document supply and information service"<sup>9</sup>.

In 1938 an agreement was made between the University and the Imperial Agricultural Bureaux, now CABI, to set up a Commonwealth Forestry Bureau within the Institute and produce various forestry abstracts<sup>10</sup>. Since then the Library has worked in close collaboration with the Forestry Department of CABI, and is recognised by the International Union of Forestry Research Organisations (IUFRO) as the Western world's depository library for forestry literature of all languages world-wide<sup>11</sup>. As a result the Library acquires more than three-quarters of its forestry material free of charge, on the understanding that it is permanently retained and made freely available for public consultation. The vast majority of this material is abstracted by CABI, for inclusion into its abstracting journals, and forms part of the CAB ABSTRACTS database. Since 1992 these have been available on CD-ROM as TREECD, which is produced by CABI with funding from OFI and the Overseas Development Administration (ODA). This provides a database containing forestry materials, dating from 1939 to the present, which is available world-wide. TREECD has proved to be one of the most heavily used resources for locating information within the forestry collection<sup>12</sup>. The Library and Information Service operates a document delivery service on behalf of CABI based on the forestry material it holds. The Library charges a fee, per page photocopied or item loaned, to CABI who makes a flat rate charge to its customers. In addition, the library has recently managed to secure external funding from the Centre for International Forestry Research

(CIFOR) in return for the provision of forestry information services to CIFOR and its collaborating organisations<sup>13</sup>. Together the Library and Information Service offer inter-library loan and photocopy services in conjunction with a full enquiry service. As yet few or no charges are made to cover basic costs incurred in carrying out searches.

### **1.2.3 The Centre for Agriculture and Bioscience International (CABI)**

CABI is a largely self-supporting intergovernmental organisation, established by a treaty-level agreement as a centre for gathering and disseminating agricultural and related scientific information<sup>14</sup>. Its emphasis is on the provision of information and support services vital to developing countries.

CABI has established four scientific institutes<sup>15</sup>. Three of these, Entomology, Mycology and Parasitology, conduct taxonomic research and provide a diagnostic identification service. This has proved crucial to scientists throughout the world in controlling pests, disease and maximising food production with minimum damage to the environment. The fourth institute, the International Institute of Biological Control, examines the role of beneficial organisms in crop protection and production.

In addition, CABI sells a range of information products and services to the developed and developing world. It gained its international reputation from its bibliographic database, CAB ABSTRACTS, which contains approximately three million abstracts<sup>16</sup>. It produces three abstracting journals in forestry: Forestry Abstracts, Forest Products Abstracts and Agroforestry Abstracts. It also produces several CD-ROMs of which two concern forestry. These are CABCD, which covers the entire CABI database from 1984 the present day, and TREECD, which covers the entire forestry database back to 1939 and is updated quarterly. This CD-ROM was launched in 1992 and was expected to increase demand for

documents from the forestry collection held within the CABI-OFI Information Service<sup>17</sup>. TREECD is now being distributed to developing countries through a sponsorship programme involving the ODA, the Asian Development Bank and the Australian International Development Assistance Bureau<sup>18</sup>. The long-term aim is to distribute 500-1000 discs to areas which, previously, have had little or no access to secondary information sources<sup>19</sup>. CD-ROM drives and training are also provided free of charge.

CABI provides access to the information sources it identifies through its abstracting services via its document delivery service which is based at Silwood Park in Berkshire. The service draws upon CABI's own library holdings, which number over 200,000 volumes covering international literature on agriculture, and is supported by a network of major libraries throughout the world<sup>20</sup> which includes the Plant Sciences Library and Information Service.

#### **1.2.4 The Oxford Forestry Institute (OFI)**

The OFI provides much of the local demand for the forestry collection. It was an organisation in its own right until the mid 1980s but is now part of the Department of Plant Sciences within the University of Oxford. It has a world-wide reputation in an area of interest to the British government and, as such, is responsible for administering ODA funds in forestry. The Institute manages the ODA's Forestry Research Programme (formerly known as the Forestry and Agroforestry Research Strategy Programme), which currently involves 82 projects, of which the OFI and other Oxford University departments undertook 39 percent<sup>21</sup>. It also manages four "Link projects" that provide a means for collaboration, in academic and research projects, between institutions in both Britain and overseas. The Institute is also active in various consultancy projects<sup>22</sup>. Line points out that the OFI is thus "in a position to make a major

contribution to pressing world problems, particularly with the information resources in the library at its disposal"<sup>23</sup>.

The Institute is also involved in teaching and research. The Plant Sciences Department registered 53 DPhil and MSc research students at the beginning this academic year, of which 16 were supervised by OFI staff<sup>24</sup>. All these students reflected the interests of the Institute in tropical forestry. A total of 25 students also enrolled on the taught MSc course, Forestry and its Relation to Land Use, for the session 1994-1995. In addition, staff at the Institute contribute to the teaching of three popular options included in the undergraduate Biological Science degree.

Research is currently continuing on 28 projects financed by the ODA, of which five are for the European Community (EC) and one each for CIFOR, the Food and Agriculture Organisation (FAO), the International Tropical Timber Organisation (ITTO) and the North Atlantic Treaty Organisation (NATO)<sup>25</sup>. The bulk of these are concerned with biodiversity, forest genetics and taxonomy. The remainder include tropical forest ecology, forest management, mycology, pathology, socioeconomics, wood properties and processing<sup>26</sup>. It is evident that demand upon the forestry collection from local use appears to be varied in subject and scope.

### **1.3 Problems within the Forestry Collection**

A number of problems exist within the current forestry collection and many of these were mentioned within the Line report<sup>27</sup> in 1992. The majority of these problems still remain, although efforts have been made to alleviate some of them. The principal difficulties are identified below :

1. The library is seriously overcrowded with little room for any expansion upon the shelves and improvised storage in corridors. In the recent past periodicals have had to be shelved upon the reading tables thus reducing working space for readers. This problem has been alleviated to some degree by weeding out of non-forestry periodical issues of more than ten years of age in readiness for their removal and storage at the Radcliffe Science Library, which is located in the near vicinity. As the Library is a major repository for the world's forestry literature, and thus receives large quantities of free publications on a continuous basis, this can only prove to be a short term solution. A more long term remedy has been sought through the conversion of older materials to microfilm, although this is taking a long time to accomplish. More recently there have been plans to transfer holdings to electronic formats and this possibility is currently being investigated<sup>28</sup>. It is not possible to dispose of holdings from the collection as the majority were donated on the understanding that they would remain freely available for public consultation and/or are recorded on TREECD as being held within the Library and as such could be requested at any time.
2. Although the collection is housed in one building, the holdings are divided amongst a number of rooms and, therefore, the collection appears disjointed and is confusing for readers. The arrangement of materials within the Library has been designed to facilitate browsing but it takes readers some time to become confident in finding their way around. These problems will be rectified to some degree by the rearrangement of materials, and some building modifications, which were being carried out during the course of this investigation.
3. The Plant Sciences Department has been placing pressure upon the Library to dispose of part of the forestry collection as it requires some of the space the collection occupies within the Department.



## **1.4 Aims of this Investigation**

This dissertation is limited to an investigation of the forestry collection and does not include the wider holdings of the Library. Although parts of the collection have been merged with the rest of the Library's stock it is still possible to clearly identify materials which are concerned purely with forestry. A number of questions have been raised by the Line<sup>29</sup> study and by the problems identified in section 1.3. This investigation will to address those issues and these are summarised below :

1.0 In order to make any decision regarding the disposal or maintenance of the forestry collection it is important to discover if the forestry collection is being used.

1.1 Who is using the collection ?

1.2 What proportion of use is local, national and international?

1.3 In order to ascertain which materials could be safely placed into storage facilities, causing the minimum of inconvenience to the collection's users, it is important to identify what parts of the forestry collection are being used and how they are being used.

How much use is generated by each service ?

What types of materials are being used ?

Is their any correlation between type and age of material being used ?

What is the relationship between in-library and circulated use ?

2.0 Does the forestry collection, in conjunction with the Forestry Information Service, provide an adequate level of service ?

2.1 What proportion of requests are satisfied ?

2.2 How do users of the Library rate the forestry collection ?

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## **2.0 REVIEW OF THE LITERATURE ON COLLECTION USAGE STUDIES**

### **2.1 Introduction**

Many studies, within the past 35 years, have endeavoured to investigate patterns of usage within academic libraries. These studies have focused on either the behaviour of the library user, or on the collections themselves. The aims and emphasis of these studies have varied, although most have attempted to discover the relationship between use and various dependent variables, such as date of publication, subject and method of selection of materials. Hart *et. al.*<sup>1</sup> identifies three main factors which have prompted interest in the application of usage studies. These are overcrowding, the need to make acquisition policies more accurate and cost effective and, finally, a desire to improve the efficiency of library services.

#### **2.1.1 Overcrowding**

Due to the rapid growth in the volume of published material library collections have been growing at an increasing rate. The Follett report states that the total number of periodicals cited in Ulrich's International Periodicals Directory rose from 62,000 in 1980 to 126,000 in 1992<sup>2</sup>. Serious overcrowding has become a problem in many libraries and, thus, there is a need to formulate a rational means for controlling and limiting that growth, without detriment to the readership. Relegation of stock, through either disposal or storage, has been increasingly emphasised as a method of conserving valuable space.

At first sight retirement and relegation activities seem totally alien to the function and purpose of academic librarianship as a support for university teaching and scholarly activities. Apart from the perennial and persistent limitation of finance, the assumptions on which academic libraries have been developed throughout the world have been based on the continual

building up of as strong and as numerous collections as possible backed by the belief as expressed by one library, that it was "destined to grow indefinitely".<sup>3</sup>

In-house usage studies provide a perspective on which types of materials are being used heavily and, alternatively, which are not. These surveys have been used to attempt to develop rules or methods by which it is possible to predict the degree of use materials will experience, by considering such objective characteristics as language, date of publication or past circulation history. The results can help the library make decisions on the likely candidature of materials for relegation and on the appropriateness of the method to be chosen.

### **2.1.2 Acquisition Method**

The reduction in library budgets over the past two decades, coupled with increases in the price of stock (between 1981 and 1992 Blackwells' Periodicals Index rose by almost 300 percent<sup>4</sup>), have increased the need for judicious selection policies to increase the cost effectiveness of library systems. Various studies have sought to investigate the relationship between usage of materials and the selection policies and procedures by which they were chosen.

### **2.1.3 Efficiency of Library Services**

As libraries become more accountable for their actions many academic libraries are seeking ways to improve and measure the effectiveness of their services to users.

Surveys offer users a chance to register their attitudes and perceptions regarding library services, including those not yet in place. Library staff can learn about the effect of current policies on library use, the level of user awareness of various services, and which services might be improved or promoted to gain support on campus.<sup>5</sup>

One of the best methods of ascertaining what users need is to obtain from them an assessment of current services, collections and space. Comparing that assessment to actual measurements of use through entrance counts, circulation counts, availability studies and other objective measures can result in better decision-making.<sup>6</sup> In turn, users can be asked to "place a value on certain services, yielding information on which to base decisions on fee-based services...[whilst]...an up-to-date measurement of a high level of satisfaction with traditional library services may help to convince university administrators...of the need for continuing support in those areas while funding for new services is increased".<sup>7</sup>

Surveys can also be used to disseminate information to users about current services the library offers and what it could provide in the future. Libraries have begun to realise the importance of targeting services to the various types of user which enter the library.

It has become apparent to libraries that it is both useful and important to understand the needs and demands of the various subsets of their clientele and match the array of available services to those needs and demands. Assessment of services can provide helpful information to adapt library programs to the changing needs of users and to make the difficult choices of emphasizing certain services over others.<sup>8</sup>

Traditional collections and services now co-exist with new methods for delivering information, which often involve electronic access by users. Increased awareness of the potential applications of library systems has facilitated investigations designed to improve library efficiency and effectiveness. Usage surveys provide a unique information base which librarians and information workers can use when making difficult decisions regarding new operating policies and integration of new services<sup>9</sup>.

## **2.2 Summary of Findings**

A review of the literature provides a considerable amount of corroborative evidence for the main theories together with some conflicting and divergent findings.

### **2.2.1 Circulated Use**

A recurring finding is that circulated use of materials within many academic libraries is low. A pioneering study was carried out in this area by Fussler and Simon<sup>10</sup> at the University of Chicago Library. They discovered that within the five year period leading up to 1958, following the accessioning of a sample of book titles, over half had not been borrowed. This finding was reinforced by Trueswell<sup>11</sup> who developed the 80/20 rule which proposed that 80 percent of the circulation requirements of a library are usually satisfied by 20 percent of the stock, which he termed the 'core collection'. He believed that the data could be useful in developing a technique for "stack thinning, core collection development, multiple copy determination, and for determining the optimal size of a libraries holdings".<sup>12</sup> However, Burrell<sup>13</sup>, in assessing Trueswell's work, uses data from Sussex University Library and from Public Lending Right sample libraries to show that the time period which is being studied is an important factor to take into consideration. A stated level of borrowing for a given proportion of the collection will vary over different periods of time. Thus, he concludes that "without such further qualification, the notion of a core collection as usually presented is not well defined".<sup>14</sup>

The contentious University of Pittsburgh study<sup>15</sup>, which was carried out over a seven year period and attempted to devise a model by which selection decisions could be made, dealt with use of the book and monograph collections held at the Hillman Library and the journal collections within its six science and engineering libraries. It too discovered that circulated use of materials was low.

Of a total book stock of 552,674 items 285,373, or 51.63 percent, circulated externally during the study period<sup>16</sup>. More specifically, the study found that any given book purchase had only slightly better than one chance in two of ever being borrowed, and when a book had not circulated within the first two years of accession its chances of being borrowed were reduced to one in four. Its chances of circulation decline further to only one in 50 if it has not been loaned during its first six years of ownership<sup>17</sup>. The Pittsburgh study defined the core collection as that containing items which had circulated one or more times<sup>18</sup>.

However, there have been a number of criticisms made towards this study. Schad<sup>19</sup> proposed that the study was based on incorrect assumptions and incomplete data which led to an over estimation of the number of books which were not circulated. He also made the point that total use cannot be based on the number of circulated, or external uses, alone and that some measure of internal use needs to be included<sup>20</sup>. Whilst, Voigt<sup>21</sup> states that research use of a library cannot be measured by studying circulation, as circulation primarily reflects undergraduate use. He maintains that the large majority of research use is carried out in the library and is not reflected by circulation data. Books that are borrowed by faculty members are primarily for teaching purposes and do not reflect their research interests.

### **2.2.2 Relationship between In-house and Circulated Use**

Although frequently investigated, the exact nature of the relationship between circulated use and in-house use is one which has remained elusive. However, one common finding amongst many researchers is that in-house use appears to parallel circulated use. Fussler and Simon<sup>22</sup> found that books which experience little circulated use also develop little internal browsing, and conversely books which have high in-house use are also those which are borrowed most. The Pittsburgh study maintained that circulation data can be utilised with a high



degree of confidence to measure total book use in terms of books used at least once, since the books which were used in-house were predominantly those which were also circulated externally<sup>23</sup>. At the Library of the University of Southwestern Louisiana, McGrath<sup>24</sup> analysed counts of books left on desks by subject. These showed that those subjects which were used heavily internally were also those which circulated more heavily. Harris<sup>25</sup> investigated in-library use at Newcastle upon Tyne Polytechnic Library and found a statistically significant connection between the number of issues and the number of in-library uses a book is likely to get by using a chi-squared test of association. This showed that books which displayed greatest in-house use were those which were also loaned more often. Similarly, Hindle and Buckland<sup>26</sup> found a strong positive correlation between the two types of usage whilst investigating book use at the University of Lancaster Library.

The exact relationship between the proportion of in-house and circulated use is difficult to measure due to differences in the definition of internal use, and the variety of methods which have been employed to collect data.

An issue is an issue and is definable as such, regardless of the use to which the book is put following the issue but no such convenient notion of in-library use exists.<sup>27</sup>

Harris<sup>28</sup> summarises the problems experienced when defining in-library use. Books may be consulted at the shelf and returned immediately to their proper places, or used away from the shelf and returned. Books may also be left on tables and used by a succession of readers. It is also possible that users will take books back to tables and leave them there without actually using them. The majority of these problems highlight how in-library use can be underestimated. Harris<sup>29</sup> placed a slip inside selected books in such a way that it could not be seen unless the book was removed from the shelf and consulted. The user was

then asked to throw the slip away. If they did not do this it was still possible to see that the book had been disturbed. By using this method he was able to deduce that the actual number of books being consulted was approximately 20 times as high as those being used at desks and not reshelfed.

McGrath<sup>30</sup> found in-house use to be lower than circulation after carrying out a survey of books left on desks, whilst Pritchard, Auckland and Castens<sup>31</sup>, studying a reshelfing count at City of London Polytechnic Library, found the ratio of in-house to circulated use to be 2.34:1 Fussler and Simon<sup>32</sup>, measuring number of books disturbed, found that there was considerably more browsing, perhaps three to nine times as much, as circulation.

Various researchers have noted that the ratio between in-house and circulated use of books can vary widely between libraries. Stockard, Griffin and Coblyn conclude that:

This wide range is explainable to some degree by differing parameters of type of in-library use being measured, but differences are also attributable to factors such as loan policies, ease of access to materials, availability of seating, as well as variations in demand characteristics of specific clienteles.<sup>33</sup>

Line and Sandison<sup>34</sup> state that results of analysis in one library are strictly applicable only to that particular library.

### **2.2.3 Obsolescence**

The hypothesis that age is a factor determining use, as previously mentioned by Burrell<sup>35</sup> (see section 2.2.1), has been further substantiated by several researchers.

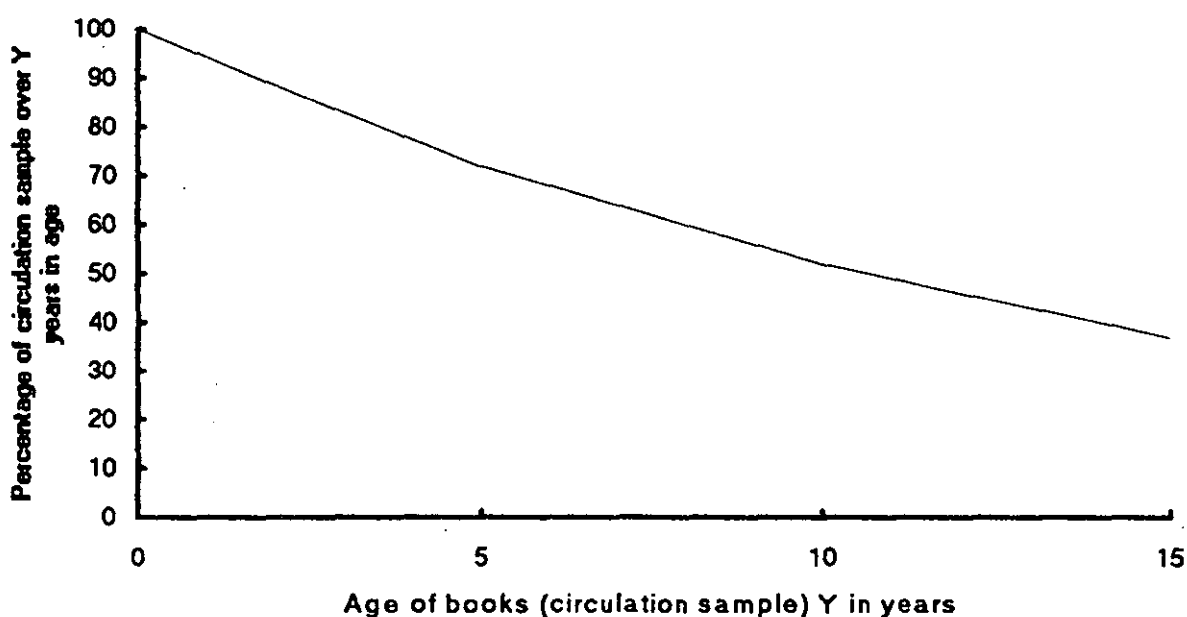


Figure 2.1 Percentage of circulation sample over Y years in age vs. age of books in years. (Adapted from Trueswell<sup>36</sup>).

Fussler and Simon<sup>37</sup>, Trueswell<sup>38</sup> and Morse<sup>39</sup> maintain that book use decreases exponentially over time (see Figure 2.1), whilst Morse developed a probabilistic model with which to predict future usage based on these findings. The Pittsburgh study<sup>40</sup> found that use amongst journals was primarily of current issues, which tended to be found by browsing, whilst older material was accessed via references. Use of journals older than 25 years of age was only five percent or less<sup>41</sup>.

Line and Sandison<sup>42</sup>, whilst carrying out a thorough review of the literature, noted that obsolescence, as defined as something which is used less and less, can apply to both documents and the information they contain. Thus, they point out that studies of documents can only serve as partial indicators of obsolescence.

Decline in document use can occur even though the information recorded is still valid and potentially useful; it is not possible to tell, from decline in document use, which type of 'knowledge obsolescence' is occurring -

changes in use do not necessarily correspond to changes in value or validity.<sup>43</sup>

They conclude that whilst most studies show heavy use of the most recent literature and a lower use of items of more than two or three years old, this can be qualified by taking into account the fact that the heavy use new items receive, is followed by a reduced level of steady use over subsequent years. They call these two phases 'updating' and 'basic use'<sup>44</sup>.

Obsolescence has also been shown to vary between different subject areas. Hodowanec<sup>45</sup> examined declining book usage within individual instructional departments at Emporia State University. He found that rates of obsolescence varied substantially between different departments and suggested that these might result from several influences. Substantial growth and expansion of theory, research and, thus, publications in a particular field results in a higher annual rate of book obsolescence for that field's collection, whilst those fields which rely predominantly upon textbooks show low rates of obsolescence.

#### **2.2.4 Effect of other Variables on Use**

Various studies have investigated the connection between variables, other than age, on use. The relationships between use and book price, presence on recommended reading lists and loan category, have been studied by various researchers<sup>46</sup> without reaching clear conclusions. However, Urquhart and Urquhart<sup>47</sup>, Fussler and Simon<sup>48</sup> and Trueswell<sup>49</sup> have discovered significant differences in use between different subjects. Whilst McGrath<sup>50</sup>, states that high levels of usage are inversely related to the degree of "hardness" associated with the subject.

### **2.2.5 Past Use as a Predictor of Future Use**

Many studies have attempted to devise rules which can be used to predict accurately what use stock is likely to experience in the future. These guidelines can then be used to make informative decisions on what materials to discard or place into storage. Fussler and Simon<sup>51</sup> investigated several criteria, such as language, accession date and age of materials, and found earlier use to be the most significant in determining later use. They concluded that :

...past use over a sufficiently long period is an excellent and by far the best predictor of future use.<sup>52</sup>

Trueswell<sup>53</sup> analysed past circulation records, for books which were currently in use, by noting their last circulation date. He found that 99 percent had circulated at least once during the last eight years. From this he concluded that books which had not circulated within eight years could be relegated, whilst maintaining a high degree of user satisfaction. He added that the advantage of this method is that it would not select out books that might be old and yet still used frequently. The Pittsburgh study<sup>54</sup> also agrees that past use is the best predictor of future use and proposed a weeding rule that combines this with an age factor.

In order to satisfy the requirement that less than one half of one percent of yearly acquisitions be returned to the actual circulating collection, we do not weed any materials that are less than 7 years old, irrespective of whether they have circulated or not; and weed only those books 7 years old or older that have not circulated.<sup>55</sup>

Similarly, Urquhart and Urquhart<sup>56</sup> investigated book and periodical use and concluded that relegation of items prior to a certain age was not necessarily the best method. They propose that past use should be a deciding factor when carrying out weeding policies.

### **2.2.6 Problems Associated with Relegation and Resource Sharing**

Many authors have also pointed out the difficulties associated with reliance on remotely held resources and the drawbacks of relegation, and offer words of warning about the effects of injudicious weeding policies. Schad<sup>57</sup> observes that, for many disciplines, research use is characterised by less intensive use of a vast body of materials which must be examined to determine if they contain relevant information. He concludes that provision of this material through interlibrary loan would not be practical through cost alone. In addition, he points out that whilst instructional use can be predicted easily, research use is subject to continual shifts in interests and emergence of new field of knowledge.

Line<sup>58</sup>, in his capacity as Director General of the British Library Lending Division (BLLD), notes that the organisation has had to develop, maintain and improve its services as many libraries have increasingly found their own resources inadequate to meet the growing needs of their readers. He predicts that this situation is likely to get worse as economic difficulties mean that libraries place still more demands upon the BLLD. However, he points out that beyond a certain limit it becomes more expensive to borrow than buy.

It is very clear to me that we are always a supporting system, never an alternative to adequate local provision.<sup>59</sup>

In addition, Havard-Williams<sup>60</sup> recognises that there are supply problems with Inter-Library Loan. New books are often unavailable and there can be waiting lists for other materials. Hart *et. al.*<sup>61</sup> state that past use is a purely quantitative measure and does not make any judgement about the 'worth' or 'value' of each circulation. They argue that in an academic library it is likely that there will be a relatively high percentage of low-use materials, due simply to the nature of research and the way knowledge is created. The University Grants Committee

report that most universities have special collections of books and manuscripts and many of these are of high importance. They state :

Although we do not think special collections can in principle be immune from removal to reserve storage, in many cases they will have to be excluded partially or entirely from any such arrangements. The custody of such collections, attracting scholars in particular fields and enriching the university as a centre of learning, is an entirely appropriate function for a university library.<sup>62</sup>

Similarly, Urquhart and Urquhart argue that the huge collections held by university libraries are precisely the type of service expected from academic libraries. They believe that "the fact that volumes gain in usefulness for research purposes when grouped with related works which increase their significance provides added justification"<sup>63</sup> for the cultivation of collections.

Clarke<sup>64</sup> raises a number of issues which must be taken into account when considering storage as an option in collection management. He maintains that one of the biggest growth areas, within British universities, has been the one-year postgraduate Master's degree course. He states :

Here the production of a dissertation or mini-thesis, approximating to original research, is commonly an important requirement: and this demands access to substantial holdings in a single place...One of the most frequently expressed needs of...readers is for direct access to substantial runs of journals so that the researcher can follow the development of a theory or a controversy.<sup>65</sup>

Whilst, Stockard *et. al.*<sup>66</sup> state that storage can further reduce use of materials by removing the facility to browse. Open browsing permits a serendipity less likely to occur if readers are required to use bibliographies and catalogues. This is supported by research they carried out which showed that three to nine times as much browsing goes on in open stacks as does circulated use.

### **2.2.7 Relationship between Patron and Use**

Various studies have discovered differences in the materials used by different categories of patrons. The Pittsburgh study<sup>67</sup> noted that, within the six science and engineering libraries they investigated, journal use was principally by students, and of these, graduates were the most frequent users. Students tended to access materials by reference whilst faculty do more browsing. Use by staff could be divided into two types: purely personal use, and faculty use. Faculty use can involve photocopying of a particular article for distribution amongst students during classes. In this case the use is greater than is initially apparent. They also discovered that use was primarily departmental, and that use by staff and visitors was low. Treude<sup>68</sup>, however, in investigating use of a map library found that there was wide use by other departments. Student use was heavy, but faculty and visitor use was lower than expected. She surmised that this may be because staff were under-represented by her sampling methods as faculty are reluctant to fill out forms.

Whitlatch<sup>69</sup> investigated library use patterns amongst full and part-time faculty and students at San Jose University. In common with a number of other researchers, she found that a large percentage of the students enrolled at the university do not make use of library facilities. Part-time faculty and staff use the library less than their full-time contemporaries. Many undergraduates rely heavily on text-books and class distributed materials, and there is a difference in the amount of use generated by the separate disciplines.

### **2.2.8 Relationship between Selection and Use**

Another type of use study, although not directly relevant to this dissertation, are those which have investigated the relationship between method of selection and subsequent use. Hart *et. al.*<sup>70</sup> reviewed the main theories and found that the majority of studies show that library staff are the most successful at selecting



materials which will be used more often. Osiobe<sup>71</sup> conducted an investigation at the University of Port Harcourt Library, Nigeria, by comparing circulation records for books selected by library staff, with those selected by academic staff. He found that, of those selected by library staff 43.52 percent had circulated at least once during the period 1978-1979, compared to only 31.5 percent of those selected by academic staff<sup>72</sup>. Hart *et. al.* suggest that this may be because "academic staff tend to concern themselves more with the selection of research-related materials, which are inherently less likely to receive the volume of usage that material more related to teaching might"<sup>73</sup>.

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## **3.0 METHODOLOGY**

### **3.1 Introduction**

This study aimed to investigate the extent of use of the forestry collection, at the Plant Sciences & OFI Library, evaluate use of different types of materials and determine whether an adequate level of service was being provided by the collection and its associated services. A variety of methods, both quantitative and qualitative, were employed during the course of the investigation. This combination of approaches provided an analysis of use from the perspectives of both material usage and user satisfaction within the service. The methods chosen during this study were shaped by a number of factors. These were:

- Limitations of manpower, time and finances.
- Inability to request selected information from the automated circulation system (OLIS).
- Complex layout of library which contains many small rooms and several entrance/exit points.
- Scattering of the forestry collection throughout many different rooms.
- No turnstile mechanism or identification procedure as users enter or leave the library.

These considerations meant that approaches chosen needed to be as economic as possible with staff time. Most exploited or adapted library practices which were already well established, and as such did not generate considerable amounts of extra work, whilst others were kept simple to encourage co-operation from users and library staff. The survey methods were carried out over both term and vacation time to take into account cyclical variations in use.

### **3.2 Self-Completed Questionnaires**

A self-completed questionnaire, available only within the library, was chosen as the best method to investigate which types of people were using the collection

and what materials they were using whilst they were there. It was important to target current users who had had recent experience of using the forestry collection. The numbers of staff and amount of time which would be needed to carry out an exit survey, ruled out this alternative method.

The questionnaire was kept as simple and short as possible (double sided sheet of A4 paper), and was headed by a short paragraph which stated how the completed questionnaires were going to be used. These criteria have been identified as important in achieving high co-operation rates from users<sup>1</sup>.

Questions were kept basic with answers requiring users to state the numbers of items used or tick the appropriate choice offered. This was in keeping with Ford's<sup>2</sup> findings that response rates are better when questions are simplified. Before placing the questionnaire in the library it was reviewed by the author's peer group and members of staff, at both Loughborough University of Technology and at the Plant Sciences & OFI Library, in order to test its clarity and validity.

The questionnaires were laid out around the library in ten pamphlet boxes. A notice was posted onto the front of each one which read:

Please complete a questionnaire each time you use the forestry collection.

Thankyou !!

Fussler and Simon<sup>3</sup> found through their research that if a pen was attached to questionnaires this acted as a motivater for users to respond. These were, therefore, affixed to the boxes with lengths of string in the expectation that this would increase the co-operation rate. Five boxes were placed in the serials reading room and four in the books reading room, whilst one was placed on the enquiries desk. Within each room, boxes were sited by the OPAC machines and on reading desks. These locations were chosen as the chief areas where forestry

materials are shelved and the main places, apart from at the shelves themselves, where materials can be consulted. The questionnaire survey ran over a three month period from 28th March to 30th June.

### **3.3 Observations**

During the course of the investigation the library was visited on six separate occasions, covering periods of both term and vacation time. On these days informal observations were carried out to gain a current impression of who was using the forestry collection and how many people were using it. It was usually easy to see whether forestry materials were being consulted. As the author had worked at the library within the recent past, identification of users was not a problem. A number of informal interviews were also carried out with members of library staff in order to gain opinions on general patterns of collection usage. Although not perfect, this method allowed an unobtrusive picture of everyday usage to be formulated.

### **3.4 Loan Statistics**

It was not possible to request loan statistics for forestry materials from the automated circulation system, Oxford Libraries Information System (OLIS). Therefore, a simple loan statistics form was designed which could be completed by library staff each time a reader took out a loan. It is recognised that, although this method provides information about the relationship between user type and the materials borrowed, analysis of circulation does not address the issue of internal use within an academic research library<sup>4</sup>. This method was in place for three months, from 28th March to 30th June. This covered 40 days of term and 23 days of vacation (excluding weekends and other closed periods).



### **3.5 CABI Document Delivery Records**

Records from the CABI Document Delivery service, covering the current academic year from September 1994 to June 1995, were examined. These were analysed in terms of numbers of requests, types of material requested, the age of the material and the country for which the document was destined if outside the UK. A 'request' was defined as each individual item requested.

### **3.6 CIFOR Document Delivery Records**

Records, covering the period September 1994 to June 1995, were analysed. Requests were examined for number of requests satisfied and types and ages of materials requested. All completed requests were sent to CIFOR in Indonesia. As in section 3.5 a request was defined as each item required.

### **3.7 Inter-Library Loan Records**

Inter-Library Loan (ILL) requests for forestry material, covering the period from 28th March to 30th June, were analysed. These were studied for details of type of material requested, number of requests which were placed and satisfied and details of which libraries were making requests. Ages of materials requested were not analysed as this data was not available in all cases. These were broken down by type of institution, which were public, academic, government or commercial.

### **3.8 External Enquiry Records**

External enquiries made to the Forestry Information Service, received in person or by telephone, fax or letter are logged on enquiry sheets. These records provided information about the request/s made and form of action taken by the library in response. Requests can be divided into two main types:

- Requests for specific documents
- Requests for information on a particular subject

If requests are made for documents the library checks its holdings and then arrangements can be made for photocopies, loans or visits to see the materials. Requests for information are followed by a search of TREECD<sup>5</sup> from which a printout of available literature is produced and sent to the enquirer. They are then free to follow this up by ordering photocopies, arranging loans or visits to the library.

Examination was made of one year's enquiry sheets, dating from June 1994 to June 1995. The sheets were analysed in terms of how many enquiries were received and, as each enquiry could consist of multiple requests, how many requests were made. Of these, the proportions of successful requests were determined, together with details about the types and ages of materials requested. Finally, records were examined for details about who the information / documents were required by, how they sent their requests and where the information was destined for. The enquirer's subsequent actions in response to the results of the search are not recorded on the enquiry sheets, only whether the library held the items or information required. Therefore, in analysing these forms, an enquiry was deemed successful if the library held the specific document or information on the subject required. An enquiry was defined as each individual document or piece of information requested.

### **3.9 Book Sub-Sample**

For the past 20 months, since the introduction of the automated circulation system (OLIS), items have been stamped with a black 'return date' stamp when they go out on loan. Each morning, before shelving the previous day's returned items, any books which were found on desks were given a red stamp to record in-house use. Signs were placed around the library requesting that readers did not re-shelve items they had used as a re-shelving survey was being carried out. However, it is acknowledged that most research shows that in-house use is

under-represented by table counts. Readers ignore signs and, after consulting books at the shelves or tables, return them to their proper places, or they are left on tables and used by a succession of readers, but only one usage is recorded<sup>6</sup>. This method, therefore, can only be regarded as an indication of in-house use.

A number of criteria were examined by carrying out a random sub-sample of the forestry book stock. The method chosen was that endorsed by Urquhart and Urquhart<sup>7</sup>, who selected every tenth volume along the shelf, but did not work in a strictly classified sequence but along the top shelf for a whole book stack and then back along the next shelf in the reverse direction. For each volume a note was taken of:

- Date of the last circulated use (black stamp)
- Date of the last in-house use (red stamp)
- Total number of circulated uses (black stamps)
- Total number of in-house uses (red stamps)
- Date of publication

This method provided information about the relationships between in-house and circulated use and between age of materials and their use. Reference books which were selected through the random sub-sample method were treated separately as inclusion of their use with that of the other volumes would bias the results towards in-house use. However, reference materials do provide information about the relationship between age of material and use.

### **3.10 Shelving Survey of Periodicals and Bulletins**

This method measured the relationships between in-house and circulated use, and use and age of publication, for the periodical and bulletin collections. Information about items left on desks and those returned from loan each day were recorded on a simple form by library staff. For each issue details were

noted about type of material (periodical or bulletin) and its date of publication. This method was employed over a two month period, from the 5th May to 30th June, which covered 30 days of term and ten days of vacation time.

The periodical and bulletin stock were sampled differently from the book stock for a number of reasons. Firstly, in-house use had not been recorded over the previous 20 months. If the red stamp method was employed over the short period of the survey there was a danger that a sufficiently high number of items which had been used would not be found through a sub-sampling method and, thus, results would be biased towards circulated use. Secondly, the periodical and bulletin collections are large enough to prohibit a sub-sample as this would have been very time consuming to execute. As in section 3.9, it was recognised that there was a danger that figures obtained may be an under-representation of in-house use.

### **3.11 Use of Display Periodicals and Bulletins**

After accessioning, new periodicals and bulletins are placed in a display area for two weeks where they are not available to leave the library on loan. This enables all users to have access to the latest information before use is restricted by external circulation. It was hypothesised that use of these materials would be high. Therefore, the method chosen did not include a desk count as it was presumed that items would receive multiple usage during the course of a day. Instead, the approach chosen involved attaching a simple form to the front of each issue, which was labelled thus:

USAGE SURVEY - Please tick below if you consult this journal while it is on display. (Pencils attached to display stand).

Pencils were provided in order to boost the co-operation rate. Upon removal from the display area the forms were detached and marked with the material

type (either periodical or bulletin) that it referred to. The results were then analysed by material types and amount of usage experienced during the two week display period.

### **3.12 Interviews**

In order to discover what users thought of the forestry collection a number of interviews were carried out within the library. Users were asked to rate its coverage, compared with other forestry collections that they were acquainted with within the UK, and to give their views on how well it supplied their needs and their opinions on its worth. The interviews took place on three separate occasions, once during vacation and twice during term time, on the 20th April, 18th May and 31st May. Interviews were carried out over a period of one hour in the morning and one hour in the afternoon. All readers were approached in book and serial reading rooms during these time periods. After first establishing that the respondents had at some time used the forestry collection, and were willing to spare a few minutes, a list of simple questions were asked:

1. Who are you ? (It was established whether the respondent was a member of the University, and if so which department, whether they were a student or staff member, or a visitor).
2. Have you ever used any other forestry collections ? (This was qualified with the statement that a forestry collection was defined as any other place where forestry information is stored).
3. How does this collection compare to the other collections you have used ?
4. Has this collection been able to satisfy your requirements ?
5. Can you identify any areas which you think are particularly deficient or strong within the forestry collection ?

6. How do you feel about using materials which have been converted to microfilm ? Are you indifferent, or more or less inclined, to use those materials ?
7. If this collection did not exist would you be able to obtain the information you require ? Where would you go to get it ?

Interviewees were prompted to expand and give their personal thoughts on the standard of the forestry collection. Interviews lasted between two and ten minutes in length, depending upon the interest of the interviewee and their experience of using this and other forestry collections. Replies were noted down in short hand during the interviews and then written up in full immediately afterwards. The same person was not interviewed more than once during the course of the survey.

It became more difficult to find users who had previously used the forestry collection or had not already been interviewed as the survey continued. In addition, students were less willing to spare the time for an interview, towards the end of May, due the pressures of impending dissertations and exams which took place for all students during June. It was therefore decided not to extend the interview procedure to cover June. Although this method provided valuable qualitative information about the collection, as it allowed users to give their personal opinions, it was recognised that this method can be open to bias in unknown ways, as noted by Ford<sup>8</sup>.

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## **4.0 RESULTS**

### **4.1 Introduction**

Data gathered from the various methods, which were employed, have been grouped appropriately within this chapter in order to answer the questions which were posed within section 1.4. This approach allows related results, obtained by different methodologies, to be discussed together and, thus, present a clearer analysis.

### **4.2 Use of the Forestry Collection**

This section is divided into three related areas which combine to give a comprehensive review of use of the forestry collection by examining who is using the collection, where the information supplied to users is utilised and, finally, what is being used.

#### **4.2.1 User Types**

##### **Self-Completed Questionnaires**

Twenty-three questionnaires were completed, during the three month period they were in place within the library, and of these one form was spoilt. This response rate was lower than expected since users were asked to complete a questionnaire every time that they used the collection. Analysis of the user types (see Table 4.1) reveals that representation of Oxford University users is low. From comments to library staff and through observation it was apparent that members of Oxford University, both staff and students, did not complete the questionnaires during the majority of their visits to the collection.

However, these results do provide some information about the visitors (unregistered users) who came to the library. Many visitors to the collection, unsure of admission procedures, approached the Enquiries Desk upon arriving at



the library where forms were handed to them. This means that the majority of visitors were recorded, at least upon their first visit, during the period of investigation. By studying the breakdown of types of users it is apparent that, after those respondents from Oxford University, the largest categories are members of staff and postgraduates from other universities.

Status	Type of User				Total
	Uni. UG	Uni. PG	Uni. Staff	Business	
Registered	0	6	2	0	8
Visitor	1	4	7	2	14
Total	1	10	9	2	22

Uni. UG = University Undergraduate; Uni. PG = University Postgraduate;  
Uni. Staff = University Staff.

**Table 4.1** Type and status of user gathered by self-completed questionnaire.

### Observations

It is believed, from observation of users, that the collection is used primarily by postgraduate students, in particular those studying for the MSc in Forestry, who spend a large amount of time within the reading rooms. Members of Oxford University staff are regular users although not in large numbers. They tend to pay short visits in which they scan recent periodical literature and collect references. An average of three or four external visitors can be found using the collection each week. Undergraduate use tends to be low at all times.

### Loan Statistics

Data gathered each time a registered user took out a loan revealed that the majority of use was by postgraduates (see Figure 4.1). A total of 120 postgraduates borrowed items, compared with only 30 staff members and 28

undergraduates. By dividing the figures, to show numbers of users who took out loans during term and vacation time, it is apparent that these proportions remain fairly consistent although actual numbers of users vary over the different time periods. Numbers of borrowers per day are shown below. Calculations are correct to one decimal place.

$$\text{No. of borrowers per day} = \frac{\text{Number of borrowers}}{\text{Number of days}}$$

#### **Term**

Staff	$\frac{24}{40}$	= 0.6 per day
Postgraduates	$\frac{87}{40}$	= 2.2 per day
Undergraduates	$\frac{23}{40}$	= 0.6 per day

#### **Vacation**

Staff	$\frac{6}{23}$	= 0.3 per day
Postgraduates	$\frac{33}{23}$	= 1.4 per day
Undergraduates	$\frac{5}{23}$	= 0.2 per day

Numbers of users are lower during the vacation in comparison with term time but proportions remain fairly constant. Figure 4.2 shows the proportions of borrowers during term, whilst Figure 4.3 illustrates the proportions of borrowers during vacation.

Figure 4.1  
Total

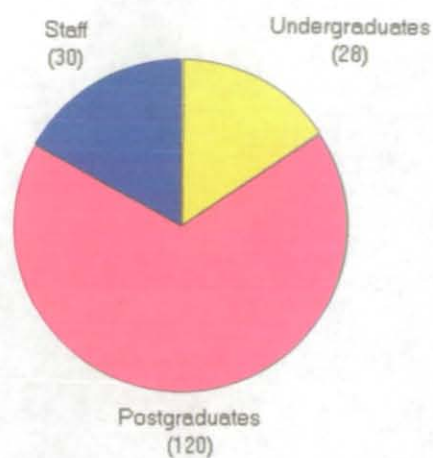


Figure 4.2  
Term

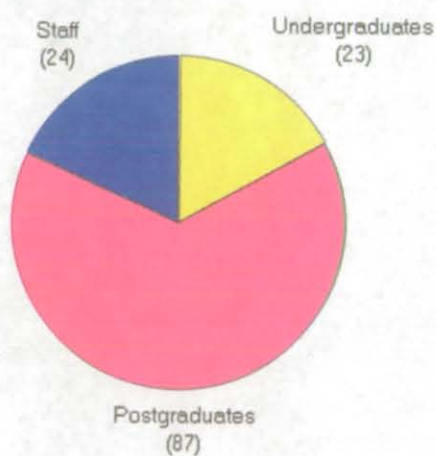
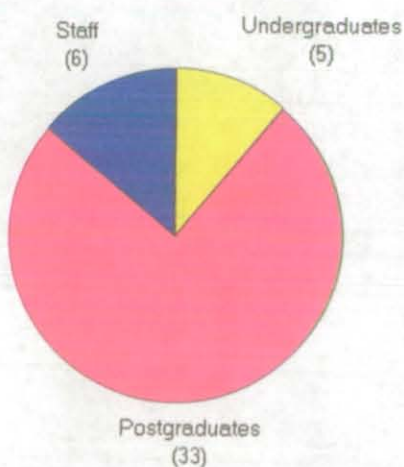


Figure 4.3  
Vacation

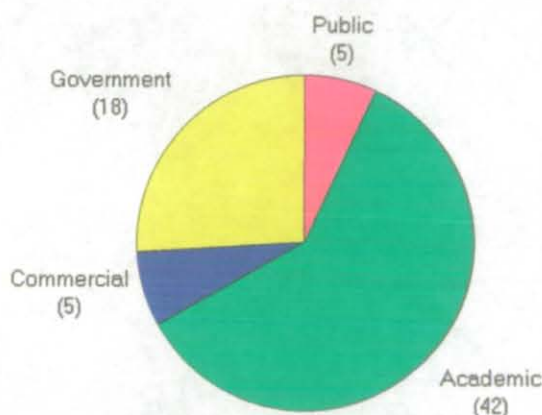


**Figures 4.1-3** Loan statistics 28/03/95 - 30/06/95. Total borrower distribution (Fig. 4.1), borrower distribution during term time (Fig. 4.2) and borrower distribution during vacation (Fig. 4.3).

Postgraduates make up the bulk of the borrowers although the percentage falls slightly from 75 percent, during the vacation, to 65 percent during term as greater numbers of staff and undergraduates take out loans.

### Inter-Library Loan Records

Figure 4.4 shows a breakdown of inter-library loan requests, for forestry material, by type of requesting library. These reveal that the majority of requests are from academic libraries, followed by half as many from government libraries, whilst the lowest number are received from public and commercial libraries.



**Figure 4.4** Inter-library loan requesting libraries.

### External Enquiry Records

A breakdown of the 62 external enquiries made to the Forestry Information Service reveals that the largest proportion of users are commercial (see Figure 4.5). This is closely followed by requests from members of the public and those in education. The education category includes requests from schools as well as those in higher education. The least number of requests are received from other libraries and government representatives. The unknown category consists

mainly of telephone enquiries were staff omitted to ask callers for this information.

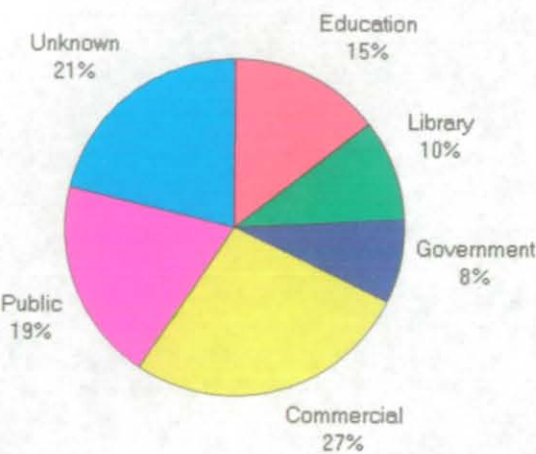


Figure 4.5 External enquirers to the Forestry Information Service.

Interviews

Twenty-two interviews were completed during the course of the investigation. In each case readers who had previously used, or were using, the forestry collection were approached. As each person was interviewed only once figures obtained are not comprehensive. These figures do, however, provide information about the types of readers who were using the collection.

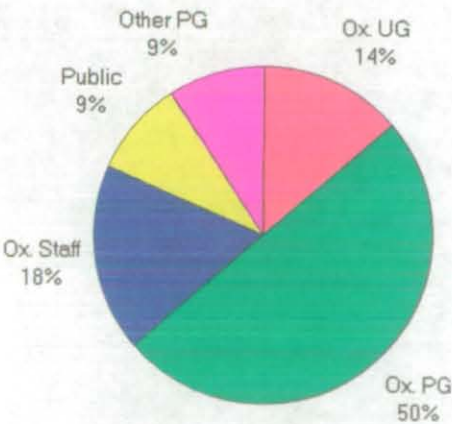


Figure 4.6 User types for forestry collection. Data from interviews. Ox. UG = Oxford University undergraduate, Ox. PG = Oxford University postgraduate, Ox. Staff = Oxford University staff, Other PG = Postgraduates from other universities.

Figure 4.6 shows that the largest group of users are Oxford University postgraduates, of which the majority are enrolled upon the Forestry MSc course. Numbers of Oxford University staff and undergraduates using the collection are low. A total of four visitors were interviewed of which two were postgraduates from other universities.

#### **4.2.2 Local, National and International Use**

##### **Self-Completed Questionnaires**

Analysis of the locations, given by respondents, where information found will be used show that the majority intend to use it within some part of the UK (other than Oxford). It is interesting to note that of the 11 recorded national uses, eight are from universities which hold substantial forestry collections. Two visits are recorded for Edinburgh University, whilst six are recorded for the University of Aberdeen. As mentioned previously, within section 4.2.1, local use is believed to be under-represented. Only two respondents reported that the information located would be used abroad.

##### **CABI Document Delivery Records**

All requests are first screened by CABI before they are sent to the library. Subsequently not all requests are on the original order form and, therefore, information about the requester's country is missing. Of the 350 requests which were made, 129 included country information of which all were international. Of the remaining 221 requests it is believed, through discussions with a CABI employee, that the majority are international with some national use. It is recognised that this cannot be proved without further investigation into CABI's records.



**CIFOR Document Delivery Records**

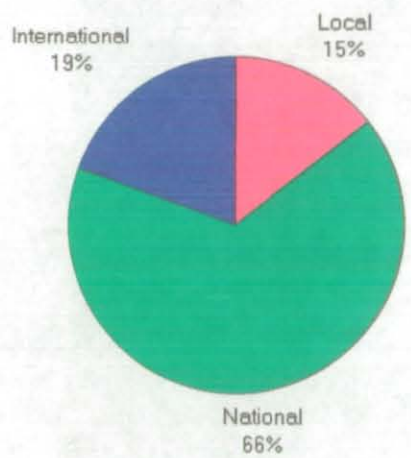
All requests are sent to CIFOR's headquarters in Indonesia so, therefore, use is exclusively international.

**Inter-Library Loan Records**

Seventy requests were received during the three month period in which records were kept. All of these were from locations within the UK although none were locally based. No international requests were received.

**External Enquiry Records**

Of the 62 enquiries made to the Forestry Information Service the majority were national, representing 66 percent of total enquiries (see Figure 4.7). Nineteen percent were international whilst only 15 percent originated from Oxford (local).



**Figure 4.7** External enquiries: proportions deriving from local, national and international sources.

**Interviews**

Twenty of the interviewees approached were based locally and these represent the majority of the respondents. As previously mentioned, in section 4.2.1, the number of locally based respondents is under-represented. Only two

interviewees were from elsewhere in the UK and one of these was from the University of Bangor.

#### 4.2.3 Use of the Different Categories of Materials

This section presents data which provides information about the levels of use contributed by the forestry collection and its associated services and investigates which parts of the collection are being used. This is achieved by investigating the use of separate types of materials and the relationship between use and age of material. Finally, use during comparable periods of time is calculated for each material type in order to determine relative use by library and external (document delivery and ILL) users.

#### Self-Completed Questionnaires

A total of 205 uses were recorded by those respondents who completed a questionnaire. Table 4.2 breaks down usage into age and type of material utilised.

Age of material (Years)	Type of Material				Total
	Book	Periodical	Bulletin	Microfilm	
0 - 5	22	86	4	N/A	112
6 - 10	12	20	4	N/A	36
Older	8	17	4	28	57
Total	42	123	12	28	205

**Table 4.2** Types and ages of materials used recorded by self-completed questionnaires.

The information was taken from 17 questionnaires as five, from the total of 22, had been incorrectly completed for this question. These respondents had ticked the boxes provided instead of stating the number of items they had used. A total



of 205 items were used. The data shows that periodical use is greatest. At 121 uses this is almost three times as many uses as books and over ten times as many uses as bulletins. 28 microfilms were used within the older category. A N/A (Not Applicable) entry was placed within the age ranges of 0-5 and 6-10 years as microfilm holdings do not cover these categories. Levels of both book and periodical use appear to be greatest amongst items aged 0-5 years with items from the 6-10 year age range forming the second largest group. Levels of bulletin use are constant within all age groups.

Table 4.3 shows a breakdown of user behaviour within the library. This information was taken from the same 17 questionnaires which were used to produce Table 4.2. These figures show that the majority of use occurs within the library as only one loan/s is recorded. Within the library the most popular action is to read material, but not borrow or photocopy it, followed by photocopying materials from the collection.

Action within library	Category of User		Total
	Registered	Visitor	
Borrow items	0	1	1
Photocopy items from the library	2	6	8
Photocopy items from outside the library collection	0	0	0
Read items from the library but not borrow or photocopy them	3	11	14
Read items from outside the library collection	0	0	0
Total	5	18	23

**Table 4.3** User behaviour recorded by self-completed questionnaire.

## Loans

A total of 441 loans were recorded during the three month period in which statistics were collected. Table 4.4 shows use by each type of borrower and the materials they borrowed.

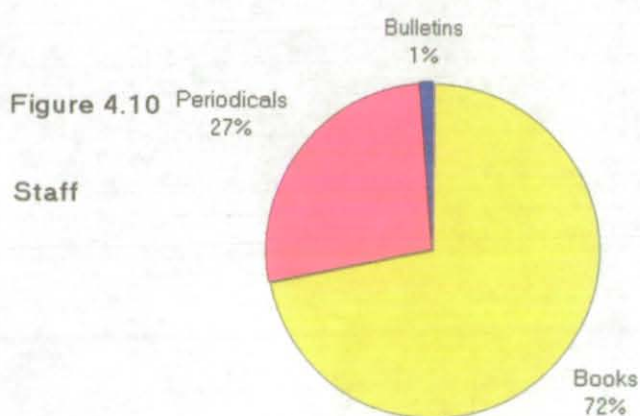
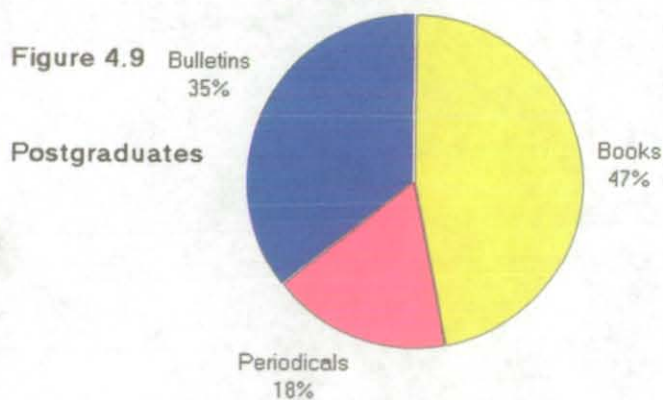
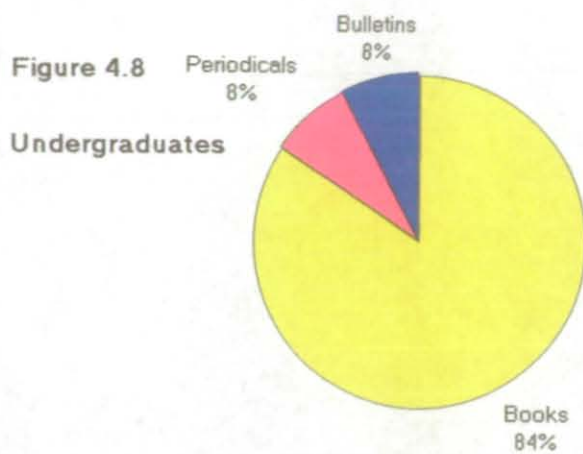
Type of Registered User	Type of Material Borrowed			Total
	Book	Periodical	Bulletin	
Undergraduate	55	5	5	65
Postgraduate	140	52	105	297
Staff	57	21	1	79
Total	252	78	111	441

Table 4.4 User type and materials borrowed. (28/03/95 - 30/06/95).

Postgraduates borrowed the majority of items, with staff borrowing just under a quarter of that amount, followed by undergraduate loans which total under one fifth of postgraduate loans. The proportions of books, periodicals and bulletins borrowed by each type of user are illustrated by Figures 4.8, 4.9 and 4.10.

At 84 percent, undergraduates tend to borrow more books, proportionally, than any other group, whilst their use of periodicals and bulletins is low.

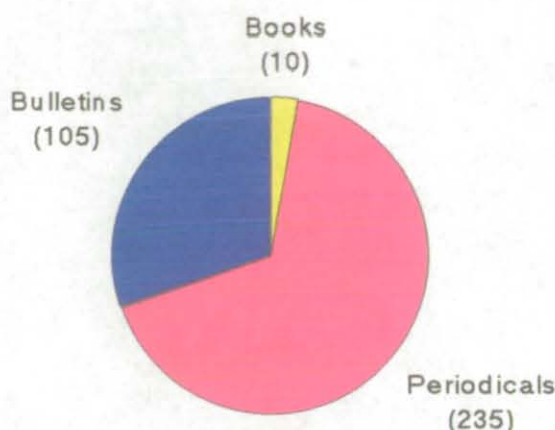
Postgraduate users borrow more often from all three groups of materials. Books make up the largest category at 47 percent, closely followed by bulletins, at 35 percent, and periodicals, at 18 percent. Staff use is also concentrated heavily upon books at 72 percent. Periodical loans form the second largest category, at 27 percent, but levels of bulletin use are very low at only one percent.



**Figures 4.8-10** Loans 28/03/95 - 30/06/95. Distribution of type of material borrowed by undergraduates (Fig. 4.8), postgraduates (Fig. 4.9) and staff (Fig. 4.10).

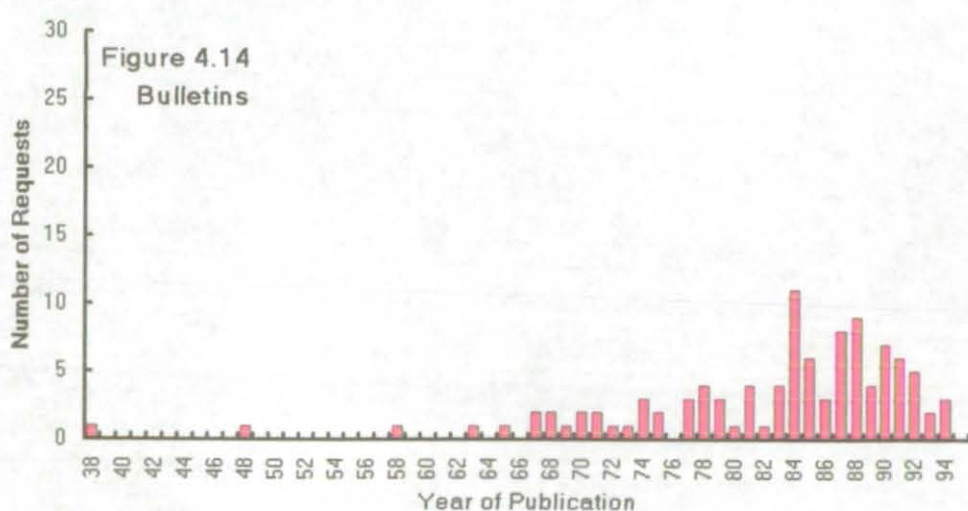
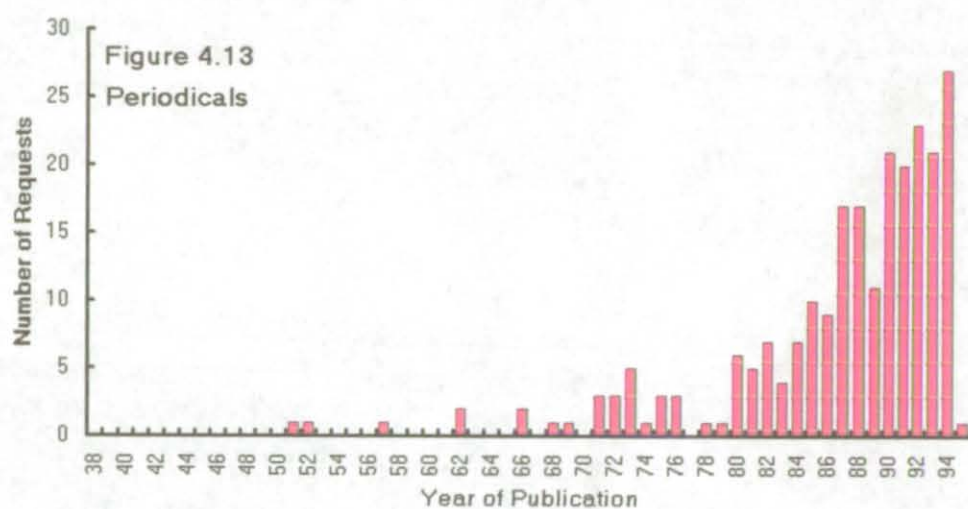
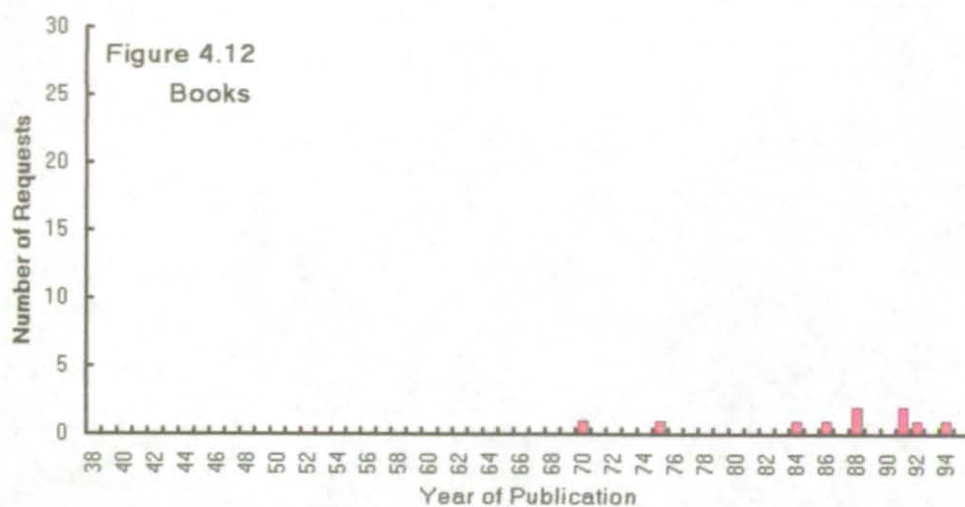
### CABI Document Delivery Records

A total of 350 requests were received and dealt with during the nine month period from September 1994 to June 1995. Figure 4.11 shows the breakdown of requests for books, periodicals and bulletins. The ratio of books to bulletins to periodicals of 2:21:47 shows that demand for periodicals is greatest whilst requests for books are low.



**Figure 4.11** Distribution of total requests to CABI document delivery. (Sept. 1994 - June 1995).

By plotting the numbers of requests for books, periodicals and bulletins against the year that they were published it is possible to see how use relates to age of materials. Figure 4.12 shows that, of the few books which were requested, use is mainly confined to items published during the last ten years. Examination of periodical use (see Figure 4.13) shows that use is highest amongst the most recently published journals although use of items published within 1995 is low. Use rises steadily, amongst more recent items, to peak at those published during 1994. The majority of use occurs in items published after 1980. A cluster of use also appears amongst items published during the 1970's. However, lower levels of use are recorded for items dating back as far as 1951.



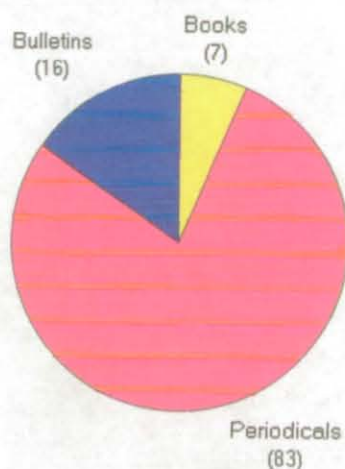
**Figures 4.12-14** Requests to CABI document delivery for books (Fig. 4.12), periodicals (Fig. 4.13) and bulletins (Fig. 4.14) against year of publication.



Figure 4.14 shows bulletin use by year of publication. The range of ages of items requested, dating back to 1938, appears to be wider than that shown by the periodicals. The usage pattern displays a bell-curve shaped distribution, peaking during the mid 1980's, as opposed to the steady increase in use, towards the most current items, shown by the periodicals.

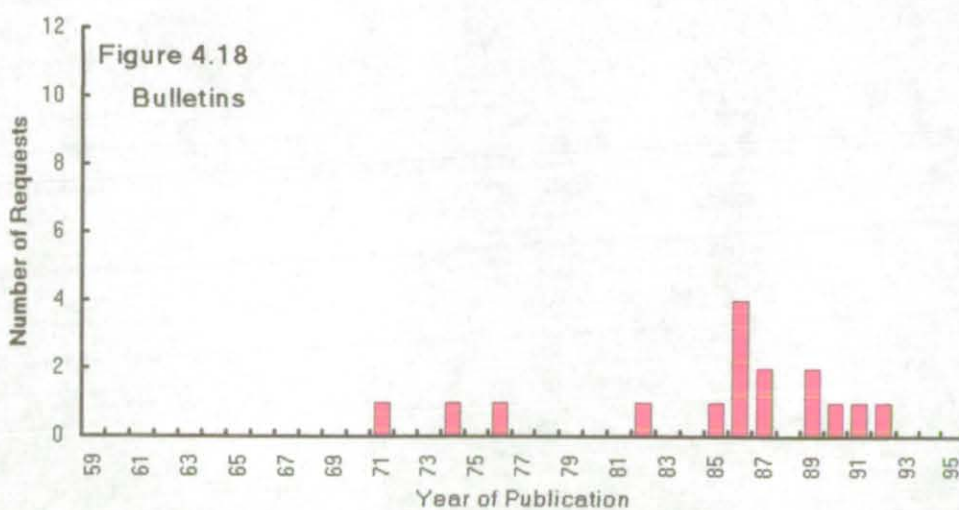
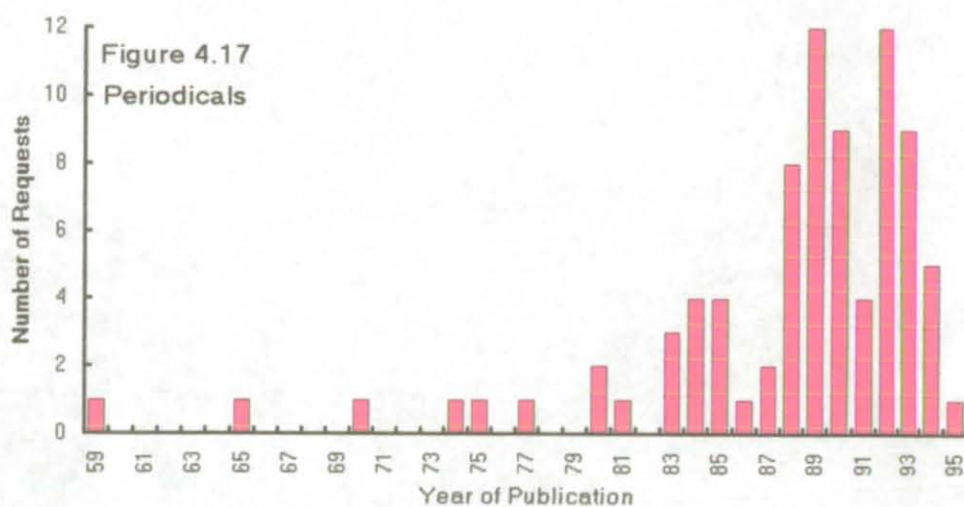
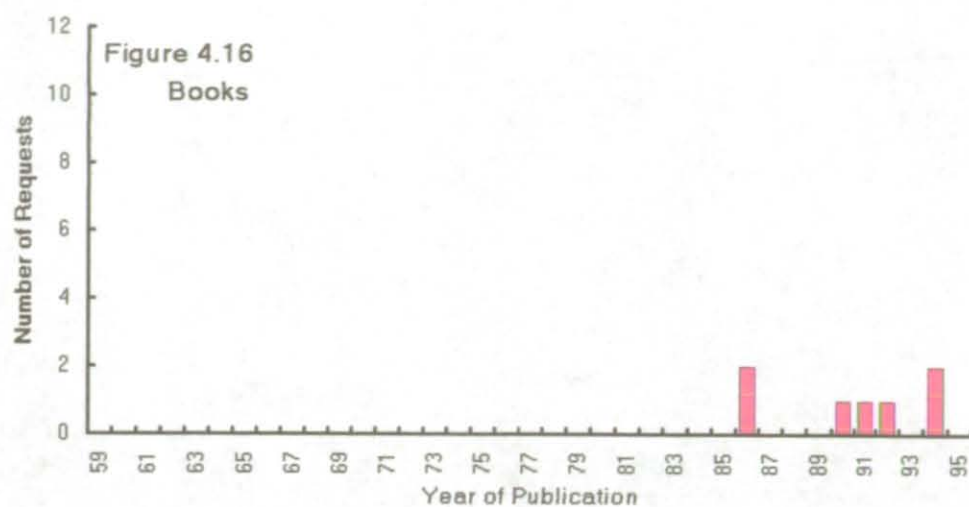
### **CIFOR Document Delivery Records**

One-hundred-and-six requests were dealt with for CIFOR between September 1994 and June 1995. This compares with 350 requests processed for CABI over the same period. A breakdown of the requests (see Figure 4.15) shows that, as with CABI's service, demand for periodicals is greatest. Demand for bulletins, at one fifth of the level for periodicals, is lower, proportionally, than that generated by CABI, whilst books show least demand.



**Figure 4.15** Distribution of total requests to CIFOR document delivery. (Sept. 1994 - June 1995).

Use by age (see Figure 4.16) shows that requests for books are centred upon items published during the last ten years. Periodical use is, again, concentrated upon more

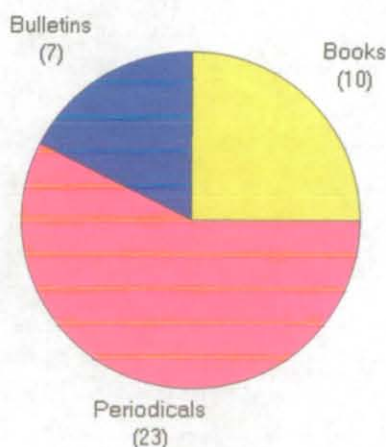


Figures 4.16-18 Requests to CIFOR document delivery for books (Fig. 4.16), periodicals (Fig. 4.17) and bulletins (Fig. 4.18) against year of publication.

recent literature. Figure 4.17 displays a bell-curve shaped distribution which illustrates that highest use is between the years of 1988 to 1992. This contrasts with the steady increase in use, amongst more recent literature, experienced by CABI's document delivery service. Bulletin use is spread fairly evenly between items published between the years of 1971 and 1992 (see Figure 4.18).

### Inter-Library Loan Records

During the three month period in which records were kept, 40 requests were dealt with successfully. Figure 4.19 shows the breakdown of requests into those for books, periodicals and bulletins. Greatest demand is for periodicals, followed by books and then bulletins. Information about the ages of these materials was not available.



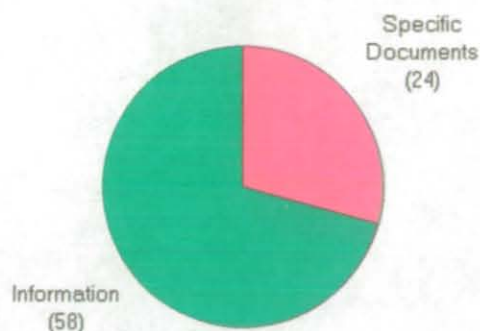
**Figure 4.19** Total distribution of satisfied requests for inter-library loan.

### External Enquiry Records

A total of 62 external enquiries were received. These often consisted of multiple requests for information and/or specific documents, therefore, individual demands were counted and a total of 101 requests were calculated. Eighty-two of these requests were dealt with successfully. Figure 4.20 shows the breakdown of the requests into those asking for information and those requiring specific documents. These show that



the majority of requests are for information on particular subjects, whilst requests for specific documents constitute 29 percent of the total demands.



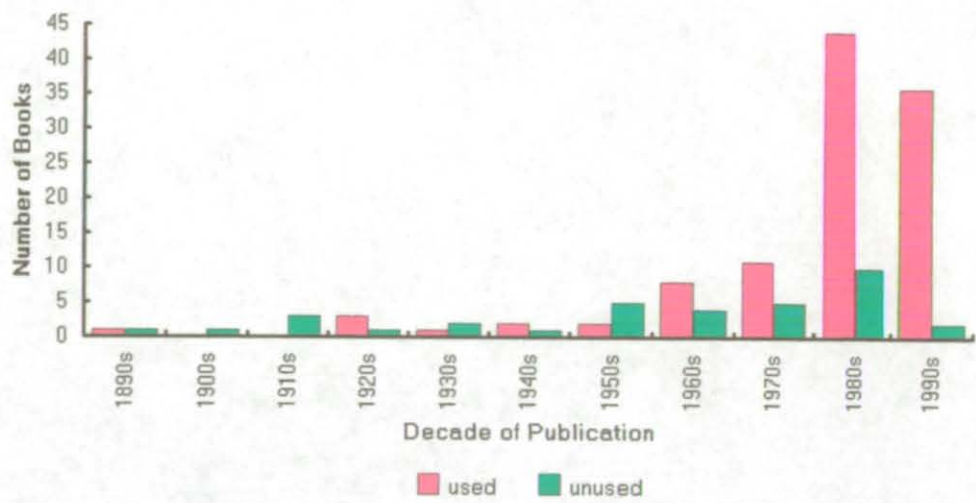
**Figure 4.20** Distribution of successful requests for specific documents and information to the Forestry Information Service. (June 1994 - June 1995).

The number of successful document requests was so low that no clear trends could be detected, as regards the relationship, between use of different types and ages of materials. A total of five books, nine periodicals and ten bulletins were requested and supplied. Most use appears to have occurred amongst items published during the last 30 years, however, due to the low numbers involved these findings are unreliable.

### **Book Sub-Sample**

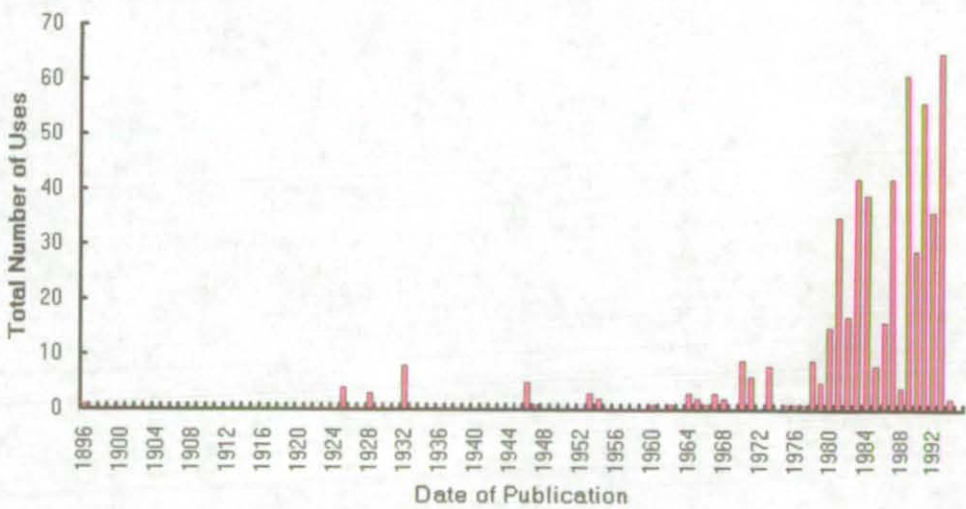
A total number of 155 books were sampled which represents approximately ten percent of the total book stock. This comprises 12 reference books and 143 loan books. These categories will be considered separately within this section. By examining the books for evidence of either in-house or circulated use it was found that only 35, out of the total of 143 books examined, had not been consulted. This means that over 75 percent of the collection had been used within the last 20 months. These books accounted for a total of 547 recorded uses.

Figure 4.21 shows that the majority of books within the collection were published between 1960 and 1995.



**Figure 4.21** Number of used and unused books in book sample for each publication decade.

The number of unused books remained low within each decade of publication. Figure 4.22 gives the total number of recorded uses against the publication date of the books. The majority of use is shown to have occurred amongst books produced during the last 15 years.



**Figure 4.22** Book sub-sample: Total number of uses against date of publication.

In order to examine the currency of book use, the month of the last usage was plotted against the number of books used (see Figure 4.23). This shows that the majority of the stock was used within the last six months.



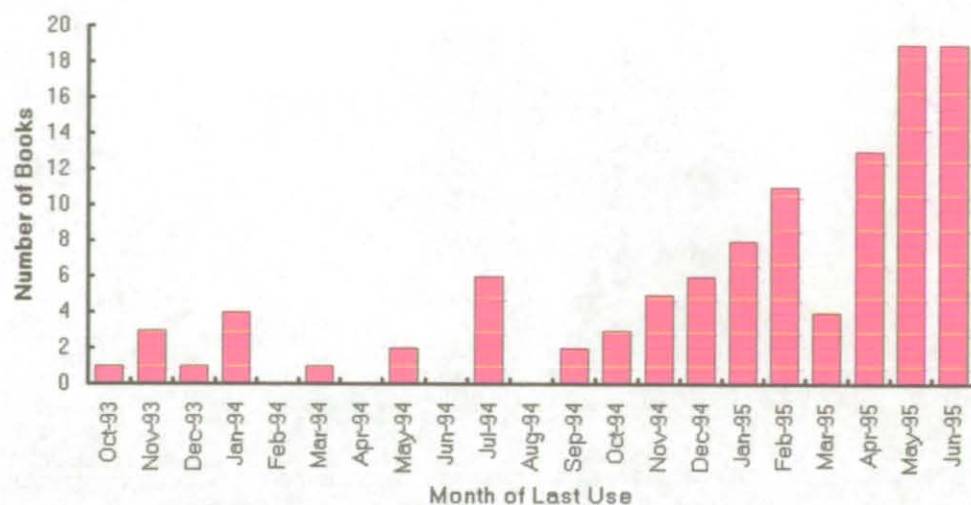


Figure 4.23 Book sub-sample: Currency of usage.

Of the 547 recorded uses, 216 were in-house and 331 were circulated uses. By plotting in-house and circulated use against decade of publication (see Figure 4.24) it can be seen that less heavily borrowed items tend to be used in-house less often, whilst those items which show higher in-house use, tend to be borrowed, proportionally, more frequently.

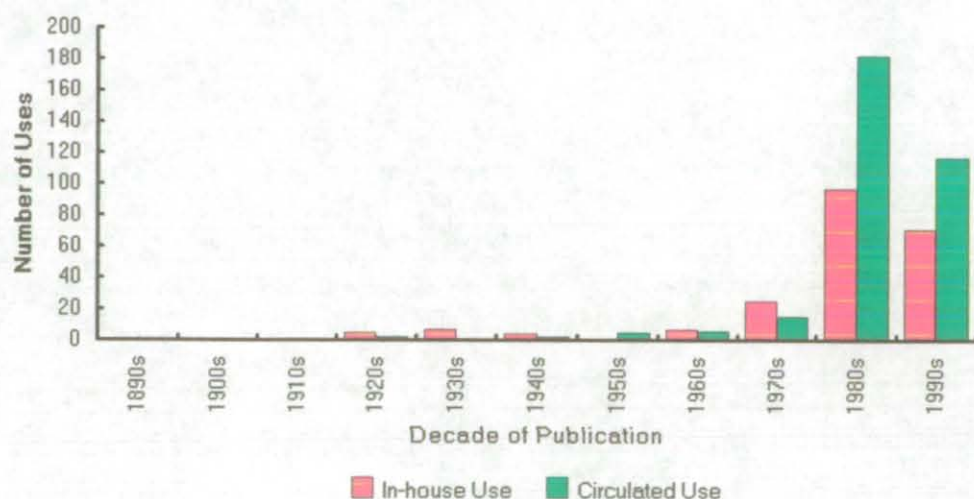


Figure 4.24 Book sub-sample: Number of in-house and circulated uses with publication decade.

The number of reference books sampled was too low to provide evidence of any clear trends in usage. Seven out of the total of 12 books had not been used during the past 20 months. Of those that had been consulted a total of nine uses

were recorded. The books ranged in publication date from 1939 to 1992. All had been used within the last 18 months.

### Shelving Survey of Periodicals and Bulletins

Over a two month period information about periodicals and bulletins left on desks (in-house use) and those returned from loan (circulated use) was recorded. The time span covered 30 days of term and ten days of vacation. Table 4.5 shows the breakdown of in-house and circulated use of periodicals and bulletins during term and vacation.

Type of use	Material type and period of use				Total
	Periodical		Bulletin		
	Term	Vacation	Term	Vacation	
In-house	238	168	145	65	616
Circulated	33	1	49	8	91
Total	271	169	194	73	707
	440		267		

**Table 4.5** Use of periodicals and bulletins during term and vacation. (05/05/95 - 30/06/95).

During both term and vacation, use of periodicals is higher than that of bulletins. Highest total use is recorded during term time but, proportionally, vacation use is higher. By calculating total rates of use, for each time period and each type of material, it is possible to see that the rate of use during vacation time is greater. Figures are correct to one decimal place.

$$\text{Rate of use per day} = \frac{\text{Number of uses}}{\text{Number of days}}$$

**Total Use During Term**

$$\frac{271 + 194}{30} = 15.5 \text{ uses per day}$$

**Total Use During Vacation**

$$\frac{169 + 73}{10} = 24.2 \text{ uses per day}$$

**Periodical Use**

Term       $\frac{271}{30} = 9.0 \text{ uses per day}$

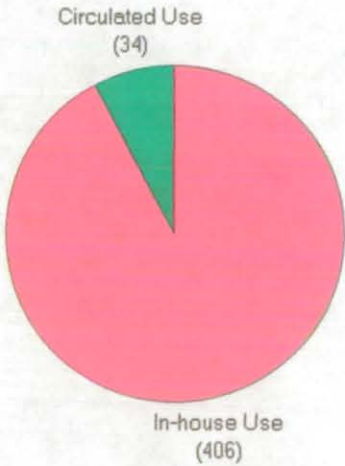
Vacation       $\frac{169}{10} = 16.9 \text{ uses per day}$

**Bulletin Use**

Term       $\frac{194}{30} = 6.5 \text{ uses per day}$

Vacation       $\frac{73}{10} = 7.3 \text{ uses per day}$

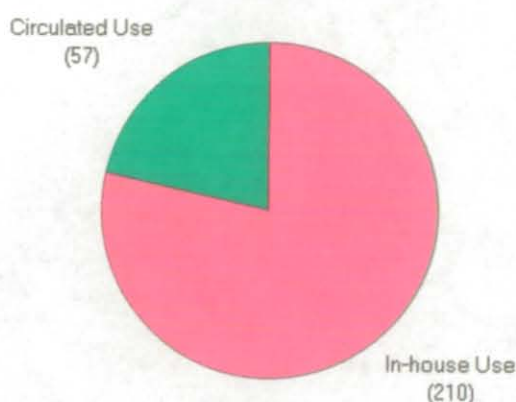
Although the figures show that there is a greater rate of use during the vacation some inaccuracies may be present due to the shorter vacation sampling time.



**Figure 4.25** Shelving survey: Number of in-house and circulated periodical uses from 05/05/95 to 30/06/95.

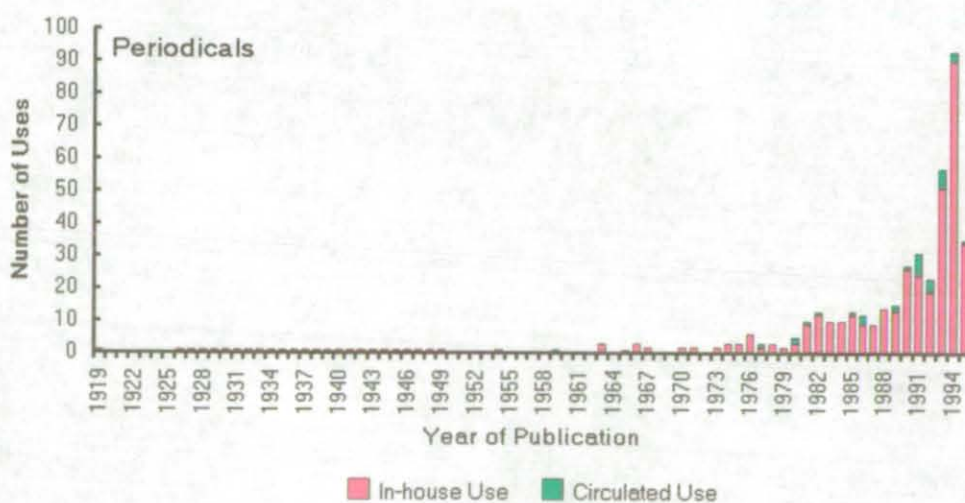
Figures 4.25 and 4.26 show the proportions of in-house and circulated use for periodicals and bulletins. Both types of material show far greater in-house use

compared with circulated use. More than 92 percent of periodical use and 79 percent of bulletin use is in-house. Analysis of the ages of materials which were being used (see Figures 4.27 and 4.28) reveals that periodical use is concentrated amongst items published since 1980, peaking at 1994.



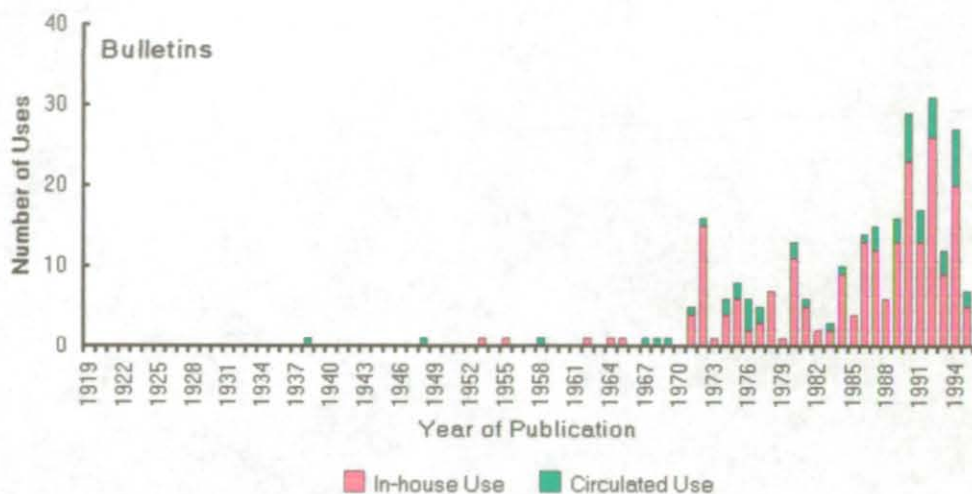
**Figure 4.26** Shelving survey: Number of in-house and circulated bulletin uses from 05/05/95 to 30/06/95.

Circulated use is highest amongst the most recent items. Bulletin use, however, appears to be less concentrated, with significant use occurring in items dating from 1971 to the present. Levels of circulated use are consistent amongst all ages of materials used.



**Figure 4.27** Shelving survey: Number of in-house and circulated uses of periodicals with year of publication (05/05/95 - 30/06/95).

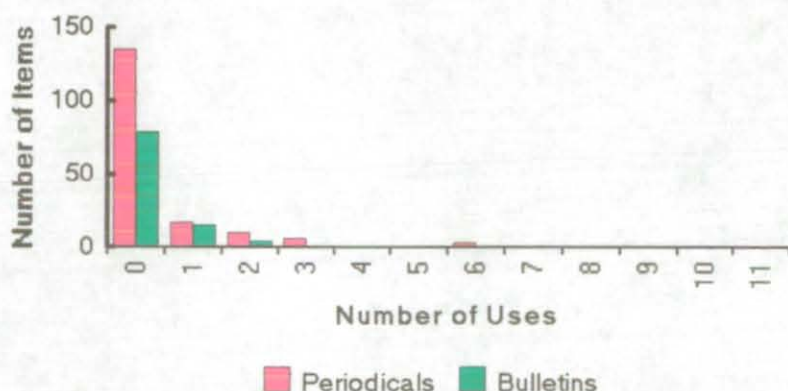




**Figure 4.28** Shelving survey: Number of in-house and circulated uses of bulletins with year of publication (05/05/95 - 30/06/95).

### Display Periodicals and Bulletins

Two-hundred-and-seventy-four items were displayed, during the two month period investigated, which consisted of 172 periodicals and 102 bulletins. A total of 125 uses were recorded for these items, of which periodicals showed 72 uses and bulletins 53 uses. However, use is patchy (see Figure 4.29) with a small number of issues responsible for the majority of consultations. A large number of periodical and bulletin issues received no use. Examination of those issues which were read reveals that the majority were used only once. Smaller numbers of periodicals and bulletins were used a greater number of times.



**Figure 4.29** Display periodicals and bulletins: Distribution of usage frequency.

## Comparative Use

Use by readers within the library and that generated by satisfied requests from external sources were calculated in order to show total and comparative use of the forestry collection. Total library use, both in-house and circulated, was recorded by shelving survey over a two month period, from 05/05/95 to 30/06/95. External use, generated by CABI and CIFOR document delivery services and inter-library loan were calculated over the same period of time. Use for each material type is broken down and shown below (see Tables 4.6 and 4.7).

### Periodical Use

Type of Use	No. of Uses	Total	%
Library use	In-house	406	87
	Circulated	34	
External use	CABI document delivery	38	13
	CIFOR document delivery	16	
	Inter Library Loan	12	
Total	506	100	

**Table 4.6** Comparative types of periodical use. (05/05/95-30/06/95).

### Bulletin Use

Type of Use	No. of Uses	Total	%
Library use	In-house	210	92
	Circulated	57	
External use	CABI document delivery	12	8
	CIFOR document delivery	8	
	Inter Library Loan	3	
Total	290	100	

**Table 4.7** Comparative types of bulletin use. (05/05/95-30/06/95).



## Book Use

As a shelving survey was not carried out for the book stock, library use was calculated differently. Figures obtained from loan records were used to show external use, however, internal use also needed to be included. This was calculated by measuring the ratio of in-house and circulated use from the book sub-sample and applying this figure to the data obtained from the loan records.

### Ratio of circulated and in-house use from book sub-sample

$$\frac{331 \text{ (Circulated use)}}{216 \text{ (In-house use)}} = 1.532$$

### Application of ratio to book loan statistics

$$\frac{184 \text{ (Circulated use)}}{x \text{ (In-house use)}} = 1.532$$

$$x = 120$$

Total book use is represented below.

Type of Use		No. of Uses	Total	%
Library use	In-house	120	304	97
	Circulated	184		
External use	CABI document delivery	1	8	3
	CIFOR document delivery	0		
	Inter Library Loan	7		
Total		312		100

Table 4.8 Comparative types of book use. (05/05/95-30/06/95).

These figures show that total periodical use is greater than that recorded for book and bulletin use. In all cases library use is greatest, although proportions of in-house and circulated use vary, as discussed previously within this chapter. Use

generated by the document delivery services and ILL is low compared with library use. Demand for periodicals forms the largest proportion of external use, followed by bulletins. Levels of external requests for books are low at only three percent.

### **4.3 Level of Service Offered by the Forestry Collection and its Associated Services**

This section presents information about the standard of the collection. The satisfaction levels reported by the users are investigated together with an examination of the success and failure rates of the Forestry Information Service to answer external enquiries and the document delivery services and ILL to provide specific documents and information.

#### **4.3.1 Proportions of Satisfied and Unsatisfied Requests Self-Completed Questionnaires**

Proportion found	Type of Search			Total
	Documents	Information	Both	
In full	5	2	2	9
Partially	6	2	5	13
Not at all	0	0	0	0
Total	11	4	7	22

**Table 4.9** Proportions of documents and information found, reported by self-completed questionnaire.

In all cases the information or documents required were found, either in full, or partially. No user recorded that they were unable to find the items they required.

### **CABI Document Delivery Records**

A total of 350 requests for specific documents were dealt with of which all were satisfied. It is, however, unlikely that a document would be unavailable as CABI are aware of the collection's content and route requests accordingly. The only circumstances in which a request would not be satisfied would be if an item had been lost or was on loan.

### **CIFOR Document Delivery Records**

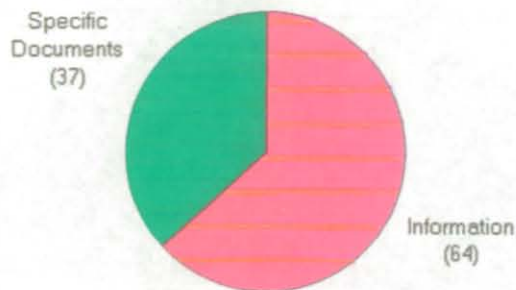
One-hundred-and-six requests for documents were satisfied for CIFOR. As requests are only placed once it is confirmed that items are held within the collection, there were no failures.

### **Inter-Library Loan Records**

Seventy requests were received by ILL of which 40, or just over 57 percent, were satisfied.

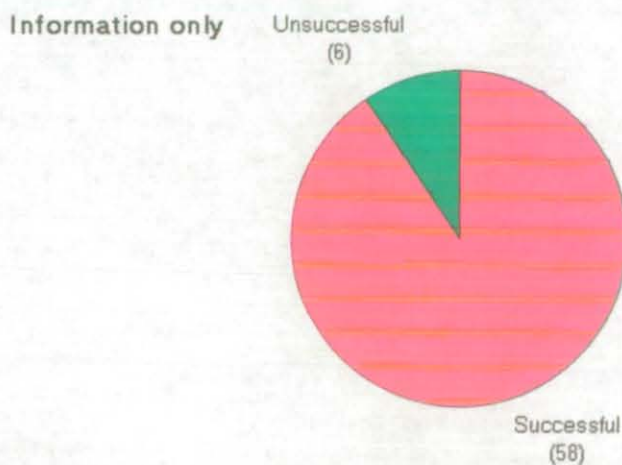
### **External Enquiry Records**

A total of 62 enquiries were received, which consisted of multiple requests for specific documents and/or information. Thus, a total of 101 requests were made, of which 64 were for information and 37 were for specific documents (see Figure 4.30).



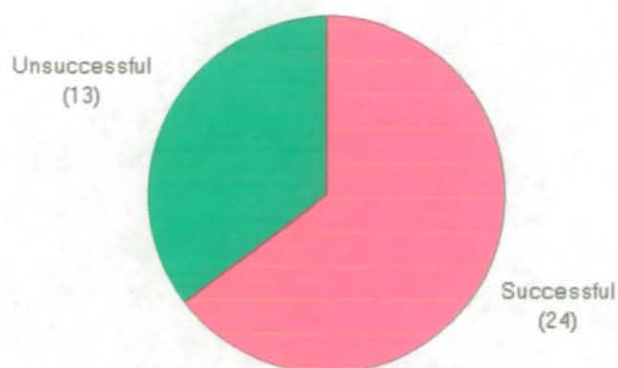
**Figure 4.30** Distribution of requests received by Forestry Information Service. (June 1994-June 1995).

Of those requests made for information, 58 were dealt with successfully. Only six demands, or nine percent, could not be met. However, whilst 82 requests for specific documents were dealt with successfully 35 percent, or 19, could not be supplied (see Figures 4.31 and 4.32). Examination of the total success rate of the service (Figure 4.33) shows that the majority are answered favourably with only 19 percent of total requests being unsuccessful.



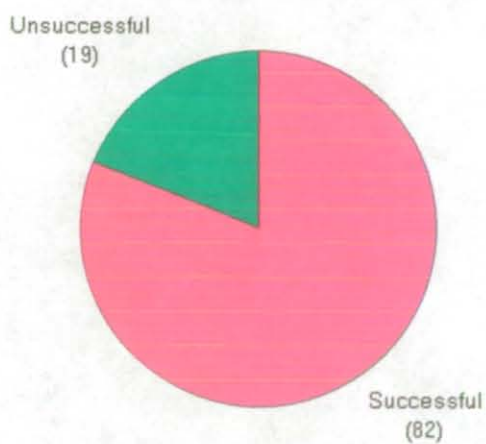
**Figure 4.31** Proportion of satisfied and unsatisfied requests for information made to the Forestry Information Service. (June 1994 - June 1995).

### Specific documents



**Figure 4.32** Proportion of satisfied and unsatisfied requests for specific documents made to the Forestry Information Service. (June 1994 - June 1995).

### Total requests



**Figure 4.33** Total proportions of satisfied and unsatisfied requests made to the Forestry Information Service. (June 1994-June 1995).

#### 4.3.2 Users' Views on the Forestry Collection

The information presented within this section was obtained through a series of interviews which were carried out amongst readers, present within the library, who had had some experience of using the forestry collection. A total of 22 readers were interviewed.

Each person was asked which other forestry collections they had previously used within the UK. A forestry collection was defined as any other place where forestry information is held. Two respondents had never used any other collection, whilst one had only used collections held abroad. Of those places mentioned, the Radcliffe Science Library, at Oxford University, featured frequently. This was closely followed by Queen Elizabeth House, also based within Oxford and affiliated to the University, which holds information on agricultural economics. A few people had used the collections held at Edinburgh and Bangor Universities and other collections held around the country, such as Kew, the Forestry Commission Library, the Overseas Development Institute Library, and the Building Research Establishment Library. A variety of different departmental libraries within the University had also been used and these included Geography, Zoology, Economics and Statistics.

When asked to rate the library, in comparison to those others that they had experience of, the respondents were positive.

*"This collection is the best I have come across."*

*"Excellent."*

*"In straight forestry there is no match, but on the botany side of forestry Kew is better."*

*"...this collection holds a lot more information."*

*"This collection is the largest."*

In direct comparison to the collection held at Edinburgh respondents stated that:

*"...the collections are as good as each other although this one is possibly more extensive."*

*"This library is better as there is more grey literature, but items are easier to find at Edinburgh."*

*"There is a better range of periodicals here."*

However another reader felt that Bangor was better for information on agroforestry.

Several respondents mentioned that the arrangement of literature was confusing and needed improving. Other readers, however, stated:

*"It is a very good collection - very comprehensive. It is easy to find information and to use and I am able to get hold of many obscure references."*

*"The layout is very good in books and journals. Only a few journals are not available."*

When asked if the collection satisfied their needs, or whether they could identify any areas of the collection which were particularly strong or deficient, a number of points were made. The majority of respondents found that they were able to locate the documents or information they required and some areas of strength and deficiency were mentioned.

*"Very comprehensive."*

*"Good on tree improvement."*

*"...not as good in forest products area but very strong on technical notes."*

*"Strong on tropical forestry."*

*"The periodicals are very good but some basic stuff such as soil information books are not here."*

*"The Radcliffe Science Library has more heathland information."*

*"The reason for using geography is because it has more information on ecology."*

Several interviewees mentioned that there was a lack of materials in the socio-economic area.

*"Could strengthen general anthropology..."*

*"The social and economic stuff is thin."*

*"One problem is that there is not enough in the socio-economic area... There are a lot of technical journals but we need some environmental and social impact journals. Need more in areas related to forestry such as natural resource management."*

Some respondents felt that the information was not as current as it might be.

*"The library is perhaps not obtaining as much information as it used to in the past. There is a lack of new books in forest products."*

*"There has been a decrease in coverage of information from tropical countries and this is a hot area [of research!]."*

*"...problems in utilisation of timber products and trade - not enough recent material."*

*"The journals are strong but the bulletins are getting weaker - not so much recent stuff."*

Although one reader stated:

*"...with the limitations of space and money the library is doing very well. It is one of our strongest resources."*

As part of the library's ongoing efforts to conserve space older items have been placed on microfilm and the original hard copy has been disposed of. Readers were asked how they felt about using this medium. Feelings were mixed with many readers citing their lack of convenience and need for initial instruction, in order to use them, as reasons for avoiding them if possible.



*"Clearer instructions on how to use and find them might make it more acceptable."*

*"Feel more comfortable with a book."*

*"They are not easy to read."*

*"...slows you down."*

However, there were a few more positive comments.

*"Not bothered that much ...prefer to use CD-ROMs though."*

*"Fine."*

*"No problems - they're good."*

*"...quite happy to use them. The more converted the better as it creates more space."*

When asked how they would cope if the collection did not exist a few respondents mentioned that they would try to obtain the information they required by ILL, or that they would visit another library in Oxford, such as the Radcliffe Science Library, or go elsewhere in the country. However, others pointed out that:

*"It would cause problems."*

*"It would be very difficult to get hold of the information. The collection is unique."*

*"It would be very difficult, especially for obscure items such as 1940 to 1950s forestry research information. This is invaluable due to the history of the collection."*

*"I would retire immediately !"*

*"It would cause problems. I wouldn't have taken the forestry option as part of the [MSc in Environment] course."*

Several readers mentioned that there were problems associated with visiting and obtaining information directly from other libraries and by ILL.

*"It is nice to browse - you can't do that everywhere."*

*"It is more useful to have a central collection as browsing is useful - especially journals for recent information."*

*"It is convenient to use this collection . It may be possible to get information from ILL but there is a time problem with this."*

*"Occasionally I use ILL but this takes time."*

*"If I had to go elsewhere, or get information by ILL, there are problems associated with time as I need information quickly. This collection is valuable as everything is in one place."*

Finally, several of the visitors mentioned their appreciation of the access given to them, by the library, to the forestry collection.

*"...appreciate the access to the CD-ROMs. It is very difficult usually to get information. Access to the general public is usually limited."*

*"This collection is great as there is free access to people outside the University...It is easier here as it is a centralised collection - it wastes less time."*

## **5.0 CONCLUSIONS**

### **5.1 Use of the Forestry Collection**

Usage has been divided into three related areas in order to give a comprehensive review of the collection.

#### **5.1.1 User Types**

Evidence, collected from the various methods employed, combines to support the view that, within the library, use is predominantly by Oxford University postgraduate students and primarily by those studying for the Forestry MSc who regularly represent a large proportion of readers, within the reading rooms. The postgraduates also form the largest group of borrowers.

Members of staff from the University, chiefly from the Plant Sciences Department, are regular users although not in great numbers. They tend to pay short visits during which they scan recent literature and collect references.

The number of undergraduate readers who use the library is approximately one quarter of that shown by the postgraduates. Undergraduates also borrow the least number of items. The content of their courses does not concentrate heavily upon the area of forestry and, where it does, the students are often given photocopied references by their lecturers. This means that they do not need to complete much original research themselves within this area. However, borrowing by staff is at similar levels and is lower than envisaged. It was expected that staff would make up a larger proportion of borrowers due to their need for information for research purposes. A possible explanation might be that staff, of whom the majority are located within the same building as the library, are able to spend more time consulting literature from the collection within the reading rooms. Staff are also more likely to be able to afford to photocopy

items. Students, for whom the library is less convenient to reach and who can afford to pay less for photocopying, seem to have been borrowing items instead.

The number of visitors averages between two and four users each week and these tend to be staff and postgraduate students from other universities. The number of visitors does not vary greatly between term and vacation time.

By examining external use of the collection it can be seen that the majority of ILL requests are made by academic libraries with the lowest proportion being formed by public libraries. This is as expected as the collection is chiefly a research collection and thus receives enquiries from locations where research is centred. However, requests to the Forestry Information Service are largely commercial or governmental in origin, with education forming only the third largest group of users. These findings may have implications for the basis of charging for this service. As yet few or no charges are made to cover basic costs incurred in carrying out searches.

### **5.1.2 Local, National and International Use**

The majority of users within the library, composed of visitors and registered borrowers, are based within the UK, with local use (from within Oxford) representing the largest proportion. Those visitors from outside Oxford included a high proportion of users from universities which hold other important forestry collections (Edinburgh, Glasgow and Bangor). This suggests that Oxford holds information which is not held elsewhere and is, therefore, fulfilling a central role within the UK in forestry information provision. It is assumed, when making this point, that ILL had been tried first before travelling to Oxford.

Upon examination of the external services it was found that requests by ILL are exclusively from within the UK. Use of the Forestry Information Service is

dominated by enquiries from within the UK, although numbers of requests from within Oxford are very low. A sizeable proportion of requests are also received from abroad. As advertising of the service is minimal, these figures are encouraging. Local use is likely to be lowest because those users, who are able to visit the library for themselves, are likely to come and do their own research. The majority of document delivery use was international which was expected since these services have been marketed heavily by CABI and CIFOR overseas.

### **5.1.3 Use of the Different Categories of Materials**

Periodical use forms the greatest proportion of total use, followed respectively by book and bulletin use. In all cases, use derived from personal visits to the library is greatest, although, within this, the proportions of in-house and circulated use varies amongst the different categories of materials.

Use produced by the document delivery services and ILL was low, representing between 3 and 13 percent of total use. Demand for periodicals forms the largest proportion of use by these services, followed by demand for bulletins. Levels of external requests for books are very low. This was expected as the external services are used, chiefly, for the provision of current information.

Use of the book stock is very high. Seventy-five percent of the collection had been used within the last 20 months and, of this, the majority had been consulted within the last six months. This high level of usage contrasts greatly with Trueswell's 80/20 rule<sup>1</sup>, which proposes that 80 percent of the circulation requirements of a library are usually satisfied by 20 percent of the stock. Use of the forestry collection could, therefore, be said to be unusually high, which leaves little leeway for stock relegation or disposal. It may be that Trueswell's rule does not apply well to specialist collections and is more appropriate when applied to general collections.

Internal book use is slightly lower than circulated use, but may have been under-represented by the shelving survey method which was used to gather this data. Various researchers have noted that there are problems estimating in-house use. Readers may immediately reshelve books after consultation, or they may be left on tables and used by a succession of readers<sup>2</sup>. In agreement with the findings of Fussler and Simon<sup>3</sup> and Harris<sup>4</sup>, the shelving survey shows that books which are borrowed a large number of times are also those which are used in-house the most and, conversely, those that are not borrowed very often are used in-house least.

Postgraduate students borrow a larger numbers of books than undergraduates and staff but, proportionally, in relation to their use of other materials, undergraduates rely most heavily upon the book stock. The fact that this group are heavily dependent upon textbooks and class distributed materials is a point which has been noted by other researchers<sup>5</sup>. Staff also borrow more books than any other type of material but, as pointed out by Voigt<sup>6</sup>, research use is not reflected by circulation data. Books borrowed by staff may be primarily for teaching purposes.

Book use amongst the external services (document delivery and ILL) is very low. Greatest external demand for books is in the form of ILL requests - but this is still minimal.

The greatest numbers of periodicals are borrowed by postgraduates, whilst, undergraduates borrow the least. However, circulated use represents only eight percent of total library use of periodicals, the vast proportion being in-house. As mentioned previously, circulated use does not represent research use effectively. This is supported by the finding that the most common activity within the library,

amongst staff and postgraduates, both registered and visitors, is to read or photocopy items, but not borrow them.

The majority of requests made by the document delivery services and by ILL are for periodical literature, reinforcing the theory that the external services are used, in the main, for access to current literature. However, this represents a relatively small proportion of total periodical use.

Postgraduates borrow the largest proportion of bulletin material, whilst numbers of recorded loans by staff and undergraduates are, again, very low. However, this represents only a small proportion of use as in-house use is very high, accounting for almost 79 percent of total library bulletin use. It would, therefore, be unwise to use circulation records as sole indicators of use as that would lead to significant under-estimates of both periodical and bulletin usage. Use of periodicals and bulletins, whilst they are on display, is confined to multiple consultation of a small number of issues.

Within the library, book use is concentrated mainly upon those items which have been published within the last 20 years. This shows that use covers a wide age range and is not simply concentrated upon the most recent literature. Amongst the document delivery services, book use was too low to show any clear trends.

Periodical use, generated from within the library, is concentrated on items published within the last 15 years but there is still use, though at low levels, of items dating back as far as 1919. Use peaks amongst items published during 1994 and 1995. Use for 1995 is approximately half that of 1995 due to the fact that only six months worth of 1995 literature was available (the survey period ended in June 1995).

Document delivery use of periodicals is greatest amongst items published within the last 20 years, but some use is recorded for older items. As the document delivery services are essentially providing current information, high use of recent literature is expected. This may also explain why demand for books, which do not contain completely current information, is low from these services.

When the age distributions of CABI and CIFOR document delivery requests are compared it is evident that there is an important difference with age in the use of each service by their clients. CABI shows a steady increase in demand for recent literature, whilst CIFOR displays a more bell-shaped distribution, peaking amongst items published during the late 1980s and early 1990s. This may be because CABI, in association with its current awareness publications and databases (which are updated regularly), is able to offer abstracts for very recent literature to its clients and, therefore, demand is for very current items. CIFOR, however, does not produce these services and so users have to obtain references for information from other sources, thus, causing a lag in currency of demands.

Use of bulletins, by visitors and registered readers, within the library is spread over a wider age range than that displayed by the periodicals. Similar distributions are displayed by the document delivery services. In all cases use is concentrated amongst items published during the last 30 years. Less frequent use of older items is also recorded. This pattern of use can be explained by the fact that bulletins tend to give a synthesis, or fuller account, of research, conferences and new methodologies. The latest findings to result from this work are presented as periodical articles. Users are then free to read the complete account within a bulletin at a later date. Bulletin use, therefore, tends to be less current. In addition, many of the bulletins tend to contain information which does not date. Information about the growth habits of different tree species, for example,



is not superseded to any great degree. Older bulletins are often as valid as those produced more recently.

## **5.2 Level of Service Offered by the Forestry Collection and its Associated Services**

The ability of the collection to provide the information or documents requested is evaluated, together, with the views of users about the standard of the collection.

### **5.2.1 Proportions of Satisfied and Unsatisfied Requests**

Within the library, all respondents reported that they were able to find, either partially or in full, the information and documents that they required. All document delivery requests were satisfied, but that was as expected since they are only routed to the library if it is known that the item is held there. Fifty-seven percent of ILL records were satisfied, which was encouraging given the fact that many requests were for information on areas outside the remit of the collection. Response rates for external enquiries, received by the Forestry Information Service, show that, overall, 81 percent were answered successfully. A greater proportion of requests for information are satisfied than those for particular documents. This can be explained by the fact that requests for documents are very specific, whilst those for information are generally broader. There is more chance of a successful outcome as, amongst such a large collection, it is likely that something on a particular subject will be held.

### **5.2.2 Users' Views on the Forestry Collection**

Users are positive when comparing the collection to others that they have used and it measures favourably against the other sizeable collections held at Edinburgh and Bangor Universities. This reinforces the point that the collection has an important part to play in the provision of forestry information, certainly

nationally, if not internationally. Most users are satisfied by the standard of the collection and are able to find what they need. Any problems caused by arrangement of materials should be alleviated after structural alterations have been completed within the library.

The collection is regarded as being strong on journals and technical information but weaker on materials within the socio-economic areas of forestry. The library is also perceived as not obtaining as much current information as it did in the past. This may be due to problems experienced during a period of staffing changes, which occurred in the past couple of years. In this time, acquisitions of current material may have declined to some extent. It is hoped that any problems in current acquisitions will be addressed in the near future.

Feelings about the use of microfilms are mixed but improved information about how to find and use them may improve their image and increase use.

Most users agree that the collection is unique and that to find the same information elsewhere would be very difficult. Others acknowledge that supply of information from remotely held sources can present problems. As recognised by Havard-Williams<sup>7</sup>, the time it takes to supply items and the lack of access to current information can cause difficulties for the researcher. Similarly, the value of browsing was emphasised by several users. Open browsing promotes greater opportunity for random discovery of literature which is less likely to occur if readers are required to use bibliographies in order to obtain information<sup>8</sup>. This view, in conjunction with the knowledge that the collection is being used, not only for recent literature but also for lower levels of older materials, supports Schad's<sup>9</sup> observation that research use is characterised by less intensive use of a vast body of materials which must be examined in order to determine if they are relevant to that particular study. The University Grants Committee<sup>10</sup> and

Urquhart and Urquhart<sup>11</sup> agree that the value of collections, such as this one, are high. The provision of these collections is the sort of service expected of universities. Provision of this volume of information by ILL would be impractical on grounds of cost alone. Therefore, in agreement with Clark<sup>12</sup>, the continued provision of substantial amounts of book, periodical and bulletin literature is essential if the Department hopes to continue to carry out research and run an MSc course in Forestry, where a substantial part of that degree is comprised of a research based dissertation.

### **5.3 Recommendations**

1. The forestry collection makes an important contribution to the forestry community at national and international levels and for this reason, together with its importance to the Department, its services need to be preserved and kept open to outside users.
2. The existing book stock should be retained in full and levels of acquisitions maintained as this is widely used for both undergraduate and postgraduate study.
3. Provision of recent bulletin literature should be improved by increased acquisition of new materials.
4. A study of the kind reported in this dissertation should be continued over a longer period of time in order to gain a more complete picture of use to assist decisions about relegation of stock.
5. If relegation and remote storage of parts of the collection are to be implemented, stock still needs to be swiftly accessible, as there is evidence of regular, if less frequent, use of materials from all parts of the collection.

6. Provision of information about use of microfilms should be improved in order to increase their potential use.
7. Taking into account the high use by commercial organisations, a scale of charges for completion of enquiries by the Forestry Information Service should be calculated and implemented.
8. Although the collection is already well used, increased publicity for the services offered by the collection, both nationally and internationally, is capable of improving external use both through visits to the library and increased use of external services.

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## **APPENDIX**

## Investigation into Use of the Forestry Collection

Date \_\_\_\_\_

Please complete this questionnaire each time you use the forestry collection.

The forestry collection comprises all items on trees and forestry.

The information you provide will be of great help to this library and will also be used in an Information and Library Studies MA dissertation.

1. In what capacity are you seeking forestry information ?

Please circle the applicable term.

- ☐ Infant / Junior / Secondary school pupil
- ☐ Infant / Junior / Secondary school teacher
- ☐ College / University student - Undergraduate / Postgraduate  
Please state institution and department \_\_\_\_\_
- ☐ College / University staff  
Please state institution and department \_\_\_\_\_
- ☐ Business person
- ☐ Information officer / Librarian
- ☐ Careers officer
- ☐ Press / Media person
- ☐ Local / Central Government representative
- ☐ Member of public
- ☐ Other:  
Please specify \_\_\_\_\_

2. Where will this information be used ?

Please state town (and country if abroad) \_\_\_\_\_

3. Were you looking for :

Please tick one

Specific document/s

Specific piece/s of information

Both


4. Did you find what you were looking for ?

Please tick one

In full

Partially

Not at all


Please Turn Over →

5. What did you use ?	Please specify number used
Periodicals / Journals	<input type="text"/>
Books	<input type="text"/>
Bulletins (Items arranged under 'international' or specific country)	<input type="text"/>
CD-ROMs	<input type="text"/>
Microfilm / Microfiche	<input type="text"/>

6. How old was the material used ? (Not CD-ROMs)	Please specify number used		
	0-5 years	6-10 years	Older
Periodicals / Journals	<input type="text"/>	<input type="text"/>	<input type="text"/>
Books	<input type="text"/>	<input type="text"/>	<input type="text"/>
Bulletins	<input type="text"/>	<input type="text"/>	<input type="text"/>
Microfilm / Microfiche	<input type="text"/>	<input type="text"/>	<input type="text"/>

7. What did you do in the library today ?	Tick as many boxes as are applicable
Borrow items	<input type="checkbox"/>
Photocopy items from the library	<input type="checkbox"/>
Photocopy items from outside the library collection	<input type="checkbox"/>
Read items from the library but not borrow or photocopy them	<input type="checkbox"/>
Read items from outside the library collection	<input type="checkbox"/>

8. Have you, or do you intend to go to any other organisation/s for this information ?	Please tick one
Yes	<input type="checkbox"/>
No	<input type="checkbox"/>
Don't know	<input type="checkbox"/>
If 'yes' please specify organisation/s: _____	

Only answer the following question if this is the **first** time you have completed one of these questionnaires.

9. How often do you use the forestry collection ?	Please tick one
Daily	<input type="checkbox"/>
Several times a week	<input type="checkbox"/>
Once a week	<input type="checkbox"/>
Once a month	<input type="checkbox"/>
Less frequently	<input type="checkbox"/>

**Thankyou for your co-operation.**  
**Please return all completed questionnaires to the Enquiries Desk.**



