

A FILING SYSTEM FOR SCIENTIFIC PAPERS AND SUBJECTS

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With the current expansion of research activities in all sciences, the number of papers published annually has concomitantly increased. As it is necessary for the scientist to be able to follow what happens in other parts of the world within his own field, it is a most pressing problem to render all the necessary information accessible with the least possible inconvenience and in the quickest manner.

The essential features required from a filing system may be considered to be as follows:

1. The system should be as simple as possible and require a minimum of work in establishing and maintaining.
2. Information must be easily accessible at any given moment. For this reason it is necessary to be able to refer both under the name of the author (authors) and under a subject index.
3. It must be possible to allow the files to gradually increase in volume without their becoming too cumbersome to handle.

Loose cards placed in boxes have hitherto undoubtedly been most commonly used. When the cards eventually increase in number it becomes, however, more and more difficult to swiftly find the card of current interest, in spite of the use of coloured marking cards, special stickers, and other aids to facilitate identification. To read a card necessitates taking it out of the box. When many cards are needed simultaneously, they are easily mixed up with other things on the desk, and time is lost finding and re-

arranging them. It is also extremely easy to misplace a card, and if there are many hundreds of cards it may be difficult to find a displaced card. Since the cards are necessarily rather thick, it is difficult to make carbon copies on the ordinary typewriter and a second copy is desirable since a collection of abstracts assembled from the literature over many years has such inestimable value that two copies should be kept at different places in case of fire or other damage.

Even though some of the disadvantages are avoided when using punched cards with needles to select the requisite cards, enough remains to motivate investigations into alternative methods.

Having tried a number of current filing systems we use a special system which after ten years of use has proved to be satisfactory in most respects.

The system is made up of three different parts interrelated with each other, viz., list of publications, cards with abstracts, and subject list.

List of publications

Firstly a list is made of publications running according to numbers and irrespective of the author's name and date of the publication. This list includes all papers. They are placed here as they come to our knowledge. As an example the following may serve,

1. Kostlán, J.: *An attempt to classify carious lesions of the enamel according to their histologic features*. Cs. Stomat., 62: 89—92, 1962.
2. Klees, L. et H. Brabant: *Les stries de Retzius de l'émail dentaire humain et leur rôle dans le développement de la carie*. Bull. Grp. int. Rech. sci. Stomat., 5: 401—459, 1962.
3. Gustafson, G. and P. Ata: *Untersuchungen über die Säureresistenz der Fluorosezähne von Isparta in der Türkei*. Dtsch. Zahn-, Mund- u. Kieferheilk., 31: 109—124, 1959.
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23. Perdok, W. G. and G. Gustafson: *X-ray diffraction studies of the insoluble protein in mature human enamel*. Arch. oral Biol., 4: 70—75, 1961.

In this way an incoming paper is listed irrespective of the authors name, journal in which it was published, and date of

publication. This list contains articles which have actual interest to us and are considered valuable. The papers may have been found in the reference part of other articles or anywhere else.

Cards in alphabetical order

Secondly, for each publication is typed on a special card (Fig. 1) the name of the author (authors), the date of publication, the title and the place of publication. As soon as the paper is

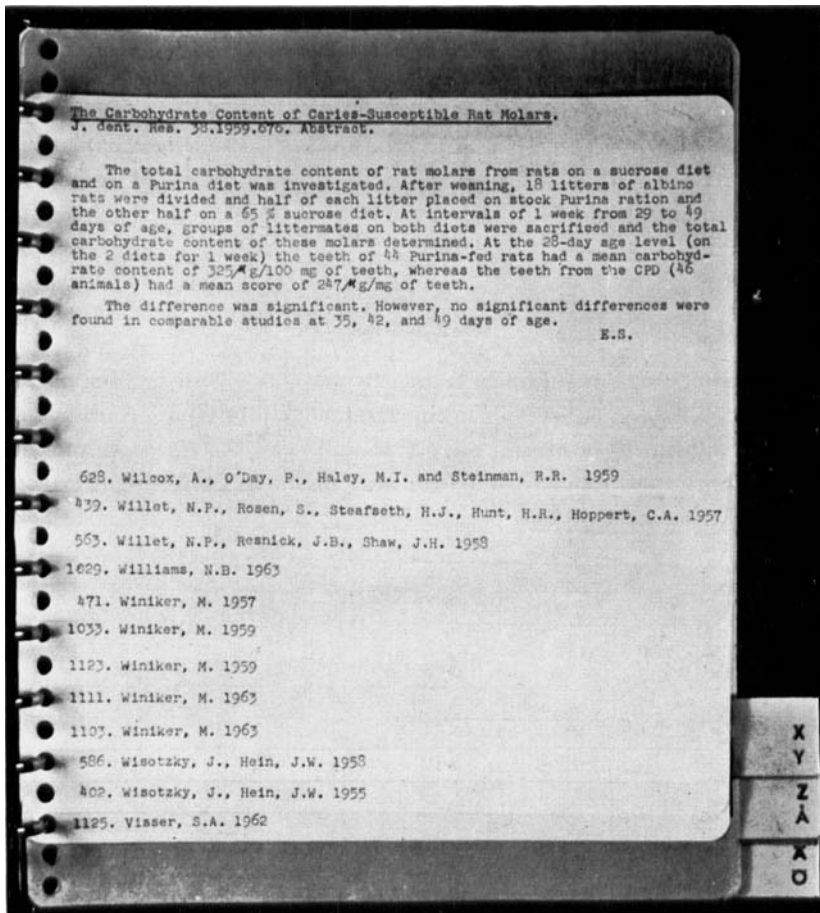


Fig. 1.

read a short abstract is added containing those essentials which interest the reader. The cards are filed in a loose-leaf ring-binder so that the lower part with the name and the date is clearly seen without disrupting the cards. The cards can be relatively soft allowing two cards to be typed at the same time.

A card is filled in the following way.

An attempt to classify carious lesions of the enamel according to their histologic features. Cs. Stomat., 62: 89—92, 1962.

Abstract: Ground sections of initial caries of the enamel. Ordinary and polarized light and microradiography. Three types of structural features were described. The differences related to the development and course of the process. In white spots the simplest and basic type. — a narrow, better mineralized surface layer. — higher demineralization parallel to the surface.

1. Kostlán, J., 1962.

All cards are arranged in the ring-binder in alphabetical order irrespective of number. Fig. 1 shows a page with 12 cards arranged in this way.

Subject list

In order to find details from the papers a subject list is arranged. This list starts with the first registered paper and thus in the beginning contains only few subjects. As an example the first-mentioned paper by *Kostlán* may be used. Different headings and subtitles can be constructed:

ENAMEL

C a r i o u s l e s i o n s

Investigating methods

Polarized light: Kostlán 1962

Morphology: Kostlán 1962

Details of carious lesions

Morphology: Kostlán 1962

Initial lesions: Kostlán 1962

When new subjects are added from later incoming publications the subject list receives new headings and each heading refers to more publications. After some time, part of the subject list may look like this,

In vitro caries: Besic 1953, Brudevold 1948, Caldwell et al. 1958, Coolidge 1955, Darling 1943, 1955, 1956, 1961, Dobbs 1932, Ehrensberger 1930, Enright et al. 1932, Forziati 1956, Fosdick & Starke 1939, Gustafson & Ata 1960, Hals 1962, Hals et al. 1955, Holst 1958, Jennings 1959, Keil 1949, Manley et al. 1961, McIntosh et al. 1925, Mühlemann 1960, Mörch et al. 1957, 1961, Newbrun 1959, Opdyke 1962, Pigman 1952, Rosebury 1938, Smith & Quigley 1961, Soni 1960, Sperder & Buonocore 1961.

Arrested caries: Hals 1962, Gustafson 1957, Mezl 1960, Röckert 1955, Torell 1955.

Now and then when the items of the subject list is increasing in number the list has to be rewritten and new headings added. In this way it is possible to adjust the subject list to any demand arising.

Thus, the only part that has to be rewritten is the subject list and this does not take much time.

The advantages of the system are:

It is easy to check what an author has written, as the cards in their alphabetical order give us this possibility. The cards never have to be removed from their place in the loose-leaf ring-binder as they are easy to get access to without taking them out.

It is easy to add new cards.

The subject list gives us all possibility to register every detail we think is useful. There is no limit to the number of headings or items that can be included.

If reprints or photocopies are available, they are placed in ring-binders according to their number. One can thus find the actual reprint immediately from the author's card with the aid of its number.

It is possible to start using this system at any time with any publication, irrespective of author, time of publishing and subject.

The practical handling is: Introducing the paper in the number list; writing a card; making an abstract; placing the items under the appropriate headings or invent a new heading if there does not already exist one on item in question; numbering the reprint and placing it in the ring-binder according to its number.

●	Rate of consumption: 604.
●	Restricted feeding: 478,499,536,538,615,616,905.
●	Topical application of sucrose: 325,336.
●	Tube feeding: 111.
●	<u>Etiological factors investigated</u>
●	Age: 15,113,445,507.
●	Basal metabolic rate: 730.
●	Diabetes: 34,396,829,940,981,1180.
●	Fluidity of ration: 2,159,229,281,359,393,416.
●	Food grown in different areas: 140,141,1073.
●	Heredity: 74,86,162,255,314,335,371,399,406,428,441,490, 663,680,704,714.
●	Maintenance factors: 81,167,241,249,304,389,394,447,489.
●	Maternal diet: 184,908,967,1044,1058.
●	Mechanical factors: 5,11,28,41,75,83,94,107,152,157,166.
●	Microorganisms: 33,65,66,67,93,118,122,146,148,153,157, 230,231,235,238,278,280,288,289,292,300, 390,411,422,428,443,487.
●	Parasitic fauna: 345.
●	Pregnancy and lactation: 25,47,172,190,836.
●	Processed cereals: 303,167,370,519,587,938,1093.
●	Psychological factors: 1042.
●	Refinement: 876,879,973.
●	Reproduction, breeding, and growth: 9,13,16,46,61,64,97,131, 963,1040,1082.
●	
●	
●	

Fig. 2.

Instead of writing the name and year of the paper in the subject list one may write only the number of the card (Fig. 2).

To sum up, this filing system allows one to:

1. Use it for practice as well as for research purposes.

2. It is easy to find the information needed, both by the subject list and by the authors' index.
3. The summaries can be read without cards being removed.
4. The binders can stand on the bookshelf.
5. It is easy to insert new forms, since one can grasp full "page" with one hand without separating the forms.
6. It is easy to make duplicates of the cards with their abstracts, which means that more than one institute or research worker can use the same file.
7. The reprints are easily accessible.

Research workers having already a cardbox system containing a large number of cards may find it laborious to change to the cards here described. It is, however, possible to use part of the system, viz. the authors' list and the subject list. The cards are arranged in their boxes according to the author's name, each card being provided with a number. A current register and a subject index are made up in the manner described above. One can easily locate the card needed, although the disadvantages of a loose card system are still present.

SUMMARY

A filing system is described which is made up of 1) a list of publications numbered as they become known; 2) cards with the name of the author(s), title, printing data and a short abstract. The cards are placed in ring-binders according to the Viscard system in alphabetical order with regard to the name of the author(s); 3) a subject list with appropriate headings under which the respective numbers of the various cards are inserted. Available reprints are given the same number as their respective cards and placed in sequence in ring-binders.

RÉSUMÉ

UN SYSTÈME DE CLASSEMENT POUR LES PUBLICATIONS SCIENTIFIQUES ET POUR LES SUJETS SCIENTIFIQUES

Avec l'expansion actuellement en cours des activités concernant la recherche dans toutes les sciences, on voit parallèlement augmenter le nombre annuel des publications. Comme il est nécessaire

que les travailleurs scientifiques soient en état de suivre ce qui ce passe dans leur domaine en d'autres parties du monde, un problème des plus urgents est la nécessité de rendre toute la documentation voulue accessible de la manière la plus pratique et la plus rapide possible.

On peut considérer que les traits essentiels à exiger d'un système de classement sont les suivants:

- 1). Le système doit être aussi simple que possible et exiger un minimum de travail pour son établissement et son maintien.
- 2). Les informations doivent être facilement accessibles à n'importe quel moment donné. C'est pourquoi il est nécessaire de pouvoir se référer tant au nom de l'auteur (des auteurs) qu'à un index par sujets.
- 3). Il doit être possible de laisser les classes s'accroître en volume sans devenir trop difficile à manier.

ZUSAMMENFASSUNG

Ein neues Kartotheksystem besteht aus:

- 1) einer Liste der Publikationen eines Forschungsgebietes. Die Publikationen werden mit Nummern versehen, je nachdem sie zugänglich werden;
- 2) Karten mit dem Namen des Verfassers, dem wissenschaftlichen Titel der Publikation, der Datierung und auch einer kurzen Zusammenfassung des Inhaltes. Die Karten werden in alphabetischer Ordnung nach dem Namen des Verfassers in einem Ringbuch eingehängt (Abb. 1);
- 3) einer Liste der verschiedenen in der Publikation erwähnten Themen mit dem Namen des Verfassers oder der Nummer der Publikation aus der obenerwähnten Liste (Abb. 2);
- 4) zur Verfügung stehenden Sonderdrücken oder Photokopien, die die Nummer der Liste zugeteilt bekommen und in Ringbüchern nach der Numerierung eingehängt werden.

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