

Knot



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Hjalmar Öhrvall on Knots (1)

Life and Works

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Följande framställning, som författaren utarbetat på lediga stunder, gör icke anspråk på att vara uttömmande eller fullständig; af ett första försök på detta område kan man knappast begära något sådant. Det bör i alla händelser kunna tjäna som grundlag för en fullständigare behandling af ämnet. Tillägg och rättelser mottages med tacksomhet.

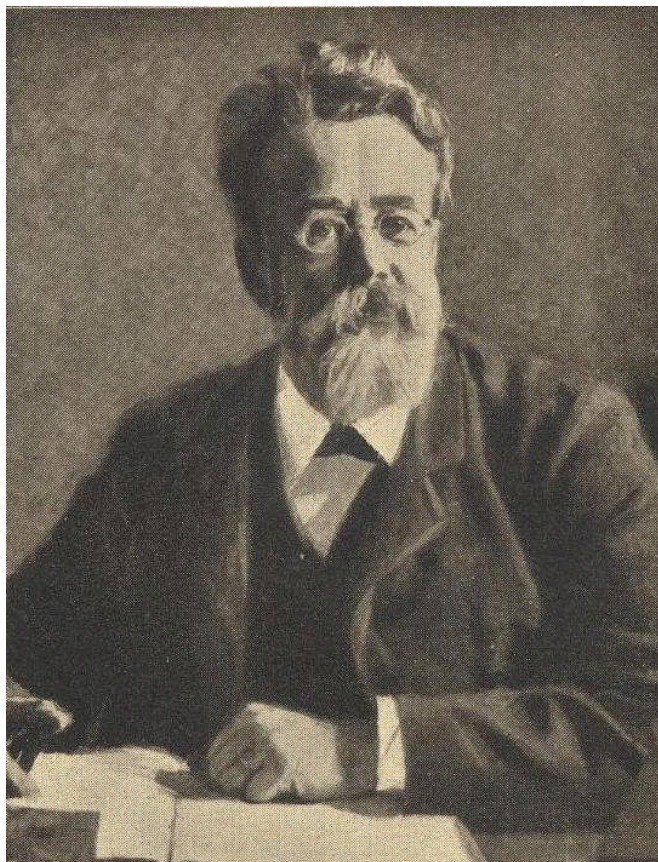
Hjalmar Öhrvall 1908 [12, p3].

Prologue

Hjalmar August Öhrvall was born on December 15th 1851 in the village of Nora, a municipality in Örebro County in Southern Sweden. He died on January 11th 1929 and his remains were cremated in Stockholm a few days later. To the right is the only image of Hjalmar Öhrvall of which I am aware exists in the public domain [21]. It was taken when he was in his 70's. An excellent, but astonishingly hard to procure, biography has been written by Valfrid Spångberg [9]. His work extensively covers Hjalmar Öhrvall as a human being and as a scientist. The book's third part expounds the influence of Darwinian thinking, which appears to have pervaded every facet of Hjalmar Öhrvall's being. Unfortunately Spångberg's work deals with Öhrvall's knotting activities in a well-hidden footnote [9, p15].

During his life Hjalmar Öhrvall published a number of knotworks, which, despite having been written in his native Swedish, managed to influence both Clifford Warren Ashley (1881-1946) and Cyrus Lawrence Day (1900-1967). Beyond those 2 instances Hjalmar Öhrvall's impact in the knotworld is hard to trace. In

the first part of this article I am directing the spotlights on the life and works of this impressive knot author from Sweden. In the second part we investigate the origins of, what I propose to call, Knot Knowledge Management (**KKM**). In the third and final part we delve into Öhrvall's influence on the knotting world in general. These papers are intended to be a timely commemoration of the KKM-centennial.



¹ This exposition, which the author has produced during idle hours, pretends to be neither exhaustive nor complete; for a first attempt in this field one can hardly request such a thing. In any case it will serve as a basis for a more complete treatment of the subject. Additions and corrections are received with gratefulness.

Öhrvall's life

Hjalmar's father was Anders August Öhrvall (1810-1882), the village chemist. In 1842 he married Märta Elisabet Westberg (1817-1852). She died soon after Hjalmar was born.

In 1872 Hjalmar Öhrvall passed his highschool exam in Uppsala. What occupied him till 1881, when he obtained his university degree, is not clear. However, 9 years is a long interval for Hjalmar to graduate on a master's diploma. In 1887 he passed his licentiat exam. Two years later, at Lund University, he successfully defended his doctoral thesis in medicine (*Studier och undersökningar öfver smaksinnet*).

Upon enrolling into Uppsala University Öhrvall became an ardent follower of contemporary scientific radicals Charles Darwin and John Stuart Mill. In fact Öhrvall's publishing debut was a translation of Mill's famous work on freedom. Among his prolific writings some were politically charged. It is alleged that Öhrvall published an anonymous guide to contraception (*Försiktighetsmåt i äktenskapet*) with a foreword by his close friend Knut Wicksell. This publication led to his temporary dismissal from Uppsala University. Spring 1893 was spent in Leipzig, Germany, where he worked under Professor Ludwig. During this extended stay abroad his travels brought him to Europe's Physiological Institutes in Berlin, Munich, Strassbourg, Innsbrück, Basel and Copenhagen. In 1899 he obtained his professorship in physiology at Uppsala University.

Hjalmar Öhrvall was a man of many talents, he was a scientist, with a drive to investigate, systemize and classify. He was interested in culture and came to play a part in the battle of Darwinian ideas and equal rights in Sweden at the beginning of the 20th century. Hjalmar Öhrvall was frequently spotted at gatherings of, and was a major proponent for, his days' feminist movement. He managed to inspire the suffragette leadership, Ann Margret Holmgren, in particular [10, pp7-8]. Together with his good friend, economist Knut Wicksell, Hjalmar Öhrvall believed himself to be a public educator, which resulted in a copious 41-volume set of collected works at the Uppsala University Library [11]. He took a keen interest in the early developments in the field of photography and championed for the introduction of radiology at the Uppsala University Hospital. Öhrvall published a number of articles on this topic in a popular magazine [19]. In the physiology department he collaborated in scientific experiments with physicist Knut Ångström, who achieved immortality by an SI-measure being named in his honour.

Hjalmar Öhrvall married twice. First time, in 1882, his bride was Tekla Tullia Vilhelmina Andersson. She was the daughter of Alfred Andersson and his aunt Vilhelmina Öhrvall. While serving at the Stockholm Serafimerlasaret, in 1882, Hjalmar contracted open tuberculosis. He recovered on Tenerife, but then his wife fell ill, so he had to look after her, being doctor, nurse and patient all in one. Öhrvall spent the winter of 1883-84 on the Canary Islands. The cure was successful and he grew so fond of the archipelago that he wrote an article on the meteorological observations he conducted during his cure! Tekla died in the autumn of 1889. In 1891 Hjalmar remarried to Elise Ingeborg Axelson [20, pp784-784]. The couple stayed together for the rest of his life and Elise gave birth to three children; Inga, Elli and Leif [9, p36].

Hjalmar Öhrvall was an optimist by nature [9, pp6-7]. This reflected in his physical and intellectual well-being. It has been said that he had the strength of 10 men and the wisdom of 20. He loved outdoor life – in both team spirit and alone. Even in later life he was a powerful swimmer and a good sailor. When surfacing, his full beard gave him the appearance of Poseidon himself. He was a singer and enjoyed playing the piano, an instrument which had interested him since his youth. However, after a gardening accident in 1915 he lost control over his left little and ring finger, which made playing hard on 3 fingers [9, pp8-9].

It is not easy to capture Hjalmar Öhrvall's character in a few words. He was a person with a strong drive to systematically investigate the world in which he lived and convey his finds and thoughts in laymen's terms. This caused him to become known as an author and translator rather than a professional researcher in physiology. A grateful spin-off of his observational powers and drive to systemize were his knot researches.

The origin of Öhrvall's knot-interest can be traced to his leisure time. Sailing on the east and west coast of Sweden he noticed the great variety of knots used by sailors [17, p51]. After he became aware of the diversity of sailor knots, he transgressed to the knots employed by the many peoples of the world, delved into the literature and began to collect illustrations from many sources. His visits to the Gothenburg Museum in particular afforded him many knot-observations. At the age of 57 all of this culminated in the 1908 publication of his first knot monograph, which he named *Om Knutar* (On Knots). This was a remarkable book for its days in which scholarship was blended with common sense and the mix applied

to the field of knots. Over the next 14 years other works flowed from his hand. Let us first focus on these individual publications before attempting a general synopsis of his collected works. In Part II we shall sketch an image of how Hjalmar Öhrvall actually launched Knot Knowledge Management (KKM).

Om Knutar (1908)

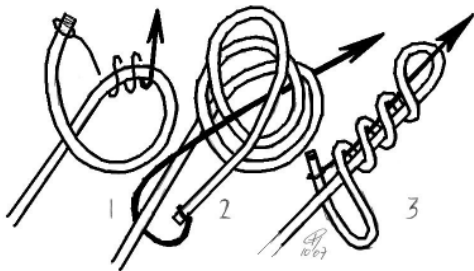
The most neutral description is that it is a book with 116 pages and 133 illustrations, which cost 2.25 Swedish Crowns when it was published by Stockholm-based Albert Bonniers Förlag [13, p157]. Its presentation squarely positioned it as the most comprehensive knot monograph the world had seen until then. It is interesting to read what drove Öhrvall to write it. His motivation, as cited from the preface:

Någon uttömmande eller ens någorlunda utförlig framställning af knutar har jag icke påträffat i vare sig vår egen eller andra länders litteratur [12, p1].

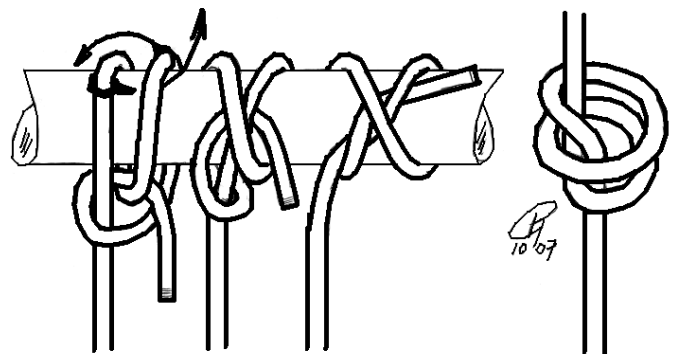
Any in-depth or otherwise extensive discourse of knots I have not found to exist, neither in our language nor in the literature of other countries.

Books dedicated to knots were surely available. In fact, his monograph presents the first bibliography on knotting sources! But, as a rule, they somehow failed to impress Hjalmar. In the quarter century prior to *Om Knutar*, the world had witnessed the Bowling [3], Burgess [4] and Biddle [2] knotshows. So, what is essentially different about this book, given the status quo of the knotbook world around 1908? Moreover, why should that ever have been a reason for Hjalmar Öhrvall to persevere in producing his book? In Part II of our article we shall investigate details of the literature context. However, let us first take a rather arbitrary look at the contents of this book.

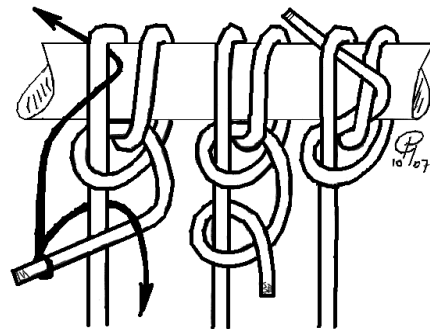
The book's table of content tells us that the traditional classification of the subject has been attempted. Only the number of pages and the depth, to which the subjects are treated, witness of a steep change, away from the contemporary, moribund, knot-scene.



The first illustration to appear in this book shows the creation of a Single Overhand Knot. It enters stage after a lengthy discussion on the making of whippings, seizings and the coiling of rope. All of it delivered verbally, without the aid of one single illustration! Öhrvall observes that there are at least 3 distinct ways for making a Multiple Overhand Knot [12, p21-23]. The final form in which the Overhand Knot is required, determines the method used. Relationships and structural transformations were generally high on Öhrvall's agenda. He notes the Anchor Bend and Strangle Knot's ability to intertransform and how, by slipping the structure off the spar, the trail leads to the Double Overhand Knot [12, p55, Figs.58,61].



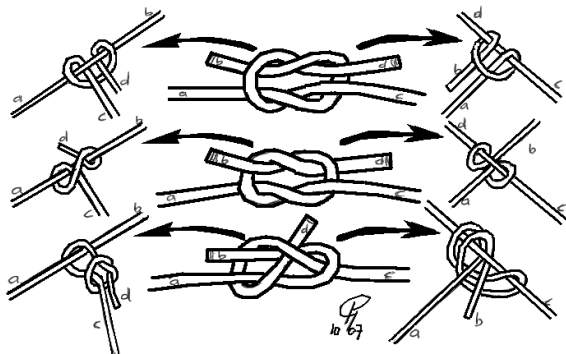
Not stopping at the Anchor Bend *structure* and its ability for modification, he elaborates the Anchor Bend *tying method* and links it to the *Studding-sail Bend* [12, p55, fig.59].



All of this may seem innocent, but will have some consequences. Öhrvall has quite outspoken opinions on how names are abused and shares them with his readership. In Part III, we shall see how this habit annoyed the established authorities.

Other examples of how Öhrvall viewed relationships based on topology are given by the isotopical deformations of the Reef Knot to the Cow Hitch, the Granny Knot to the Clove Hitch and the Sheet Bend to the Slip Knot [12, p45], [13, pp154-155]. For the Reef-Cow transformation he mentioned that this was

the way imposters manipulated knots during spiritual séances.



How he extended tying methods, is nicely illustrated with his 4-looped Bowline on the Bight [12, p51, fig.52]. This structure was later shown by Clifford Ashley as an adaptation of the Portuguese Bowline [1, p196, #1083].

Let us not yet become engrossed, as this publication returns in a second edition in 1916. The book was hailed as a pioneering endeavour by the major American knot authors Clifford Ashley and Cyrus Day. It is, however, not clear which edition pulled that feat. The major change this book delivered, as compared to previous and contemporary sources, is that it offers more opinions and departs from the trodden path. It is left to the reader to decide whether that is an act of courage, or stupidity, in a topic submerged by lore and tacit knowledge.

The 1908 edition of *Om Knutar* was published in facsimile by Rediviva Bokförlaget. Their motivating reasons remain unclear [12].

Almanack för Ungdom Article (1909)

This little article appeared in a small booklet. The more academically interesting aspects he promoted in his earlier book, provided we can call them that, are not treated here. Why this article was produced I have not been able to find out. In any case, Hjalmar did what most writers do – rehash previously published material. Nothing novel was presented here. He showed about 50 knot-structures, all of which had previously appeared in his 1908 publication. In fact he immodestly attempts to market that monograph as a source for further information!

He obviously chose this audience with care, being juvenile and educatable. Öhrvall the educator, who will never pass on any occasion to teach, tries to sell them the Slipped Ligature Knot for their shoelaces [13, p154, fig.34].

There are 49 photographic illustrations of dreadful resolution and the article essentially sticks to knots. The exceptions being the seizing, Crown Knot, Wall Knot and the Short Splice.

Nordisk Familjebok Entry (1911)

Due to its shortness this article is given in full below [8], [14]. There are no thrilling highlights, except that Öhrvall carries through the explicit distinction between nautical and rural knotnames. Many names are offered, but how correct they are can only be surmised. They are obviously names, which he collected and partially published earlier. For many of the names, which he offers here, I have not encountered any independent Nordic reference. In a future article we shall elaborate the pre-Öhrvall Nordic knotting literature environment.

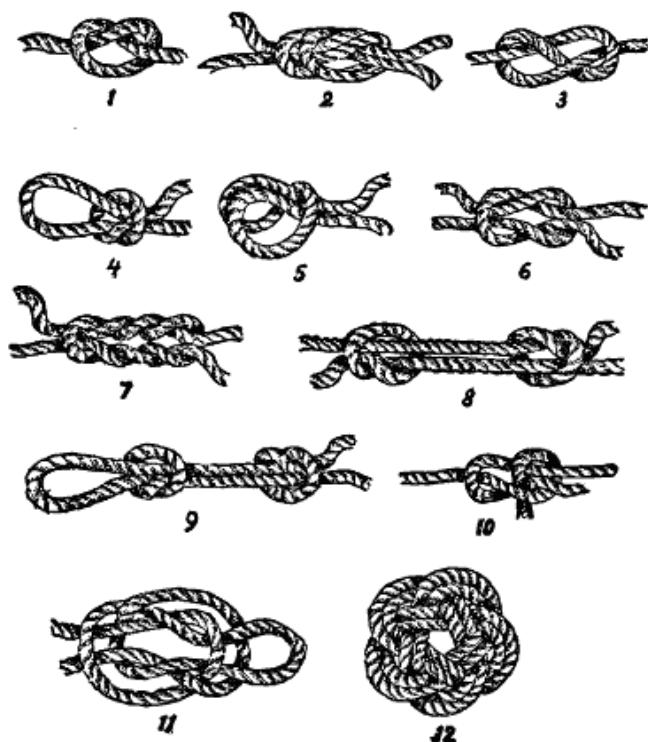
There are 12 illustrations. Excepting the criterion of Swedish nomenclature (being “knut”), it is otherwise unclear what motivated the selection. Many other Swedish knotnames, which are not presented here, also possess the knut-suffix. Most of the structures in this article are run off the mill. A possible exception being the Jug Sling Knot [1, p410, #2554]. Also note no.7, the Surgeon’s Knot. We shall return to it more extensively in part III.

Nordisk Familjebok is a popular encyclopaedia, which contains knotty contributions from other authorities on the subject. Whereas Hjalmar Öhrvall wrote about “knut”, a certain R.Nissen wrote about “stek” [5]. Freely translated the text runs

Knots are used to attach or unite rope, cordage, twine, tape and so forth to each other, or to other objects, but also fulfill decorative purposes. At sea one calls them knopar and stek (see those words). The most used knots on land are: half knot or finger knot (at sea overhandknot fig.1) which is used to connect a thread (for example while sowing), a cord, etc., but also to attach two threads with each other it is called the waterknot (fig.2), and for to make an eye, which does not slip (eye with waterknot). An Eight, or Flemish knot (fig.3), is used in similar manner. The Noose (fig.4.) is employed universally, for example when tethering a horse, but it is often hard to untie again. Better suited for that purpose are Two Half Hitches (around own part) (see knop) which is also used a lot on land, or Bowline, (see Stek). Most used of all knots will be the Reef Knot, illustrated in fig.6. At sea it is called råbandsknop and on land it has many names: hardknut, brakknut, blaknut, vråxelknut, vrångselknut, tvårknut, stenknut, smällknut among many others. Well-tied it is symmetric as differing from the useless so-called Granny Knot (kåringknuten) - see Knop. It also appears in netting (reyssjeknut). Like many other knots it is often slipped, for easy release and, as such, is used in a neck tie. It was known and appreciated already in ancient times. It appears on the Vestal statues, which have been excavated in Rome, namely on their girdles, which holds the robe and is therefore - without doubt- identical to the ancient Hercules Knot, which was believed to posses supernatural properties. Even better, when it comes to attaching two ropes, is the Sheet Bend (vävknut) (fig.10) also

called varpknut, tumknut (at sea Sheet Bend). This is the usual netting knot, in short it is said to be used all over the world. Fig. 7 is a surgical knot or tvinknut. Fig. 8 is a fiskerknut. Fig. 9 a kärleksknut. Fig. 11 is a säckknut. Valknutar consist of a ringshaped braid and are mostly used for decorative purposes. There exist 3-pleated versions (fig. 12), but also 4-, 5-, 6, etc pleats. See Hj. Öhrvall, "Om Knutar" (1908).

Knut. Knutar användas till att fästa eller förena tåg, rep, snören, trådar, band o. s. v. med hvarandra eller med andra föremål, äfvensom till prydnad. På sjön kallar man dem *knopar* och *stek* (se dessa ord). De i land mest använda torde vara följande: halfknut l. fingerknut (på sjön öfverhandsknop; fig. 1), som tjänar till att



fästa en tråd (t. ex. i tyget, när man syr), ett snöre o. s. v., men äfven till att förena två trådar med hvarandra, då den kallas vattenknut (fig. 2), och för att göra en ögla, som icke glider, ögla med vattenknut. En åtta l. flandrisk knut (fig. 3) användes på samma sätt. Rännknut l. grimskafteknut (fig. 4) användes allmänt, t. ex. när man binder en häst, men är ofta svår att taga upp igen. Bättre för detta syfte

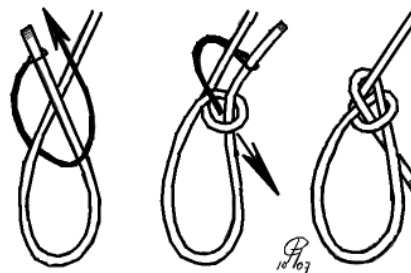
är två halflag om egen part (se Knop), som äfven användes mycket i land, eller pålstek (se Stek). Mest använd af alla knutar torde vara den i fig. 6 afbildade; den kallas på sjön råbandsknop och har i land en mängd namn: hårdknut, brakknut, blåknut, vräxelknut, vrängselknut, tvärknut, stenknut, smällknut m. m. Rätt gjord, är den symmetrisk till skillnad från den odugliga s. k. karingknuten (se Knop). Den förekommer äfven i somliga nät (ryssjeknut). Den göres ofta liksom många andra knutar med öglor, för att lätt kunna lossas, och användes sålunda t. ex. som halsduksrosett. Den var känd och värderad redan i forntiden; den förekommer på vestalernas i senare tid upprädda statyer i Rom, nämligen på den gördel, som sammanhåller manteln, och är därför utan tvifvel identisk med de gamles herculesknut, som ansågs ega öfvernaturliga egenskaper. Ännu bättre, när det gäller att förena två ändar, är väfknuten (fig. 10), äfven kallad varpknut, tumknut (på sjön skotstek). Detta är äfven den vanliga knuten i nät, använd snart sagdt öfver hela jorden. Fig. 7 är en kirurgisk knut l. tvinnknut, fig. 8 en fiskarknut, fig. 9 en kärleksknut, fig. 11 en säckknut. Valknutar bestå af en ringformig fläta och användas mest till prydnad. Det ges 3-flätade (fig. 12), men äfven 4-, 5-, 6-flätade o. s. v. Se Hj. Öhrvall, "Om knutar" (1908). H. Ö.

Viktigasta Knutarna Booklet (1912)

Viktigasta Knutarna appeared as number 185, a slim 32 page booklet, in the series *Verdandis Småskrifter*. Its subtitle purports the booklet to be "a manual for sailors, fishermen, scouts (!) and other practical people in general. It is positioned to be a "significant expansion of the 1909 article" [15, p2].

Here Öhrvall made a U-turn and decided to abandon photographic images for most of his illustrations. Daughter Elli Öhrvall started producing ink drawings. Her work is acknowledged in the booklet's preface.

An interesting illustration concerns the Fingertip Method for making the Bowline [15, p17, figs. 38-40]. Until then it was merely worded by Öhrvall [13, p156].



Once again copyright belongs to Albert Bonniers Förlag, which is peculiar for a booklet published by Verdandis. Öhrvall's liaison with student association "Verdandis" was quite special. He actively supported the association and, in turn, found them willing to publish parts of his writings on knots. Why he initially went to the much larger publishing house of Albert Bonniers for *Om Knutar* and returned to Verdandis 4 years later is an interesting question. Whether Bonniers owned copyright of *Om Knutar* 1908 - and later got it extended to 1916 – or whether Verdandis was owned by Bonniers, I do not know.

Om Knutar (1916)

After a 4 year break he erupted back onto the knotscene. What motivated this massive spurt is not clear. Öhrvall only indicates a sort of addiction to his study of knots, admits nothing, but the result speaks for itself. Anyway, in 1916 he published the second edition of the work he is best known for. Volume-wise the book expanded from 116 to 262 pages. Öhrvall showed 133 knots in his 1908 edition and expanded that number to 278 in his second edition. In 1916 he pushed out a lot of "new" knots, although he did not market them as such, and shared more of his observations and opinions. We shall return to most of these aspects in the remaining parts of this paper, together with a batch of structures he did not care to illustrate. Initially photography was important for an experimentalist, like Hjalmar Öhrvall, but by 1916 that point of view had altered. By then most illustrations were black and white line drawings by Elli Öhrvall.

When it was published, the second edition of the *Om Knutar* paperback cost the great sum of 7 Swedish kroner and 50 öre (about 1 Euro). It is curious to read how its publication announcement directs potential buyers and small libraries to his cheaper Verdandis 1912 booklet. Nowadays, in internet sales, copies of the 1916 edition of *Om Knutar* fetch well over 100 USD.

The grapevine has it that Öhrvall's 1916 edition of *Om Knutar* was (to be) translated into English. An often-quoted source for this rumour is *Seagoing Knots* by Frank Rosenow, but he is pretty clear:

In Sweden the book [om knutar 1908] has recently been reissued, so there may someday be an English translation [6, p99].

Öhrvall's monographs state that all rights to translation are reserved ("översättningsrätt till främmande språk förbehålles"). However, it is still to be awaited whether Stockholm-based publisher Bonniers, who owns copyright to most of Öhrvall's works, will actually do so. Fortunately this edition of *Om Knutar* is freely accessible online, in partial translation, on the website of the Runeberg Organization [8].

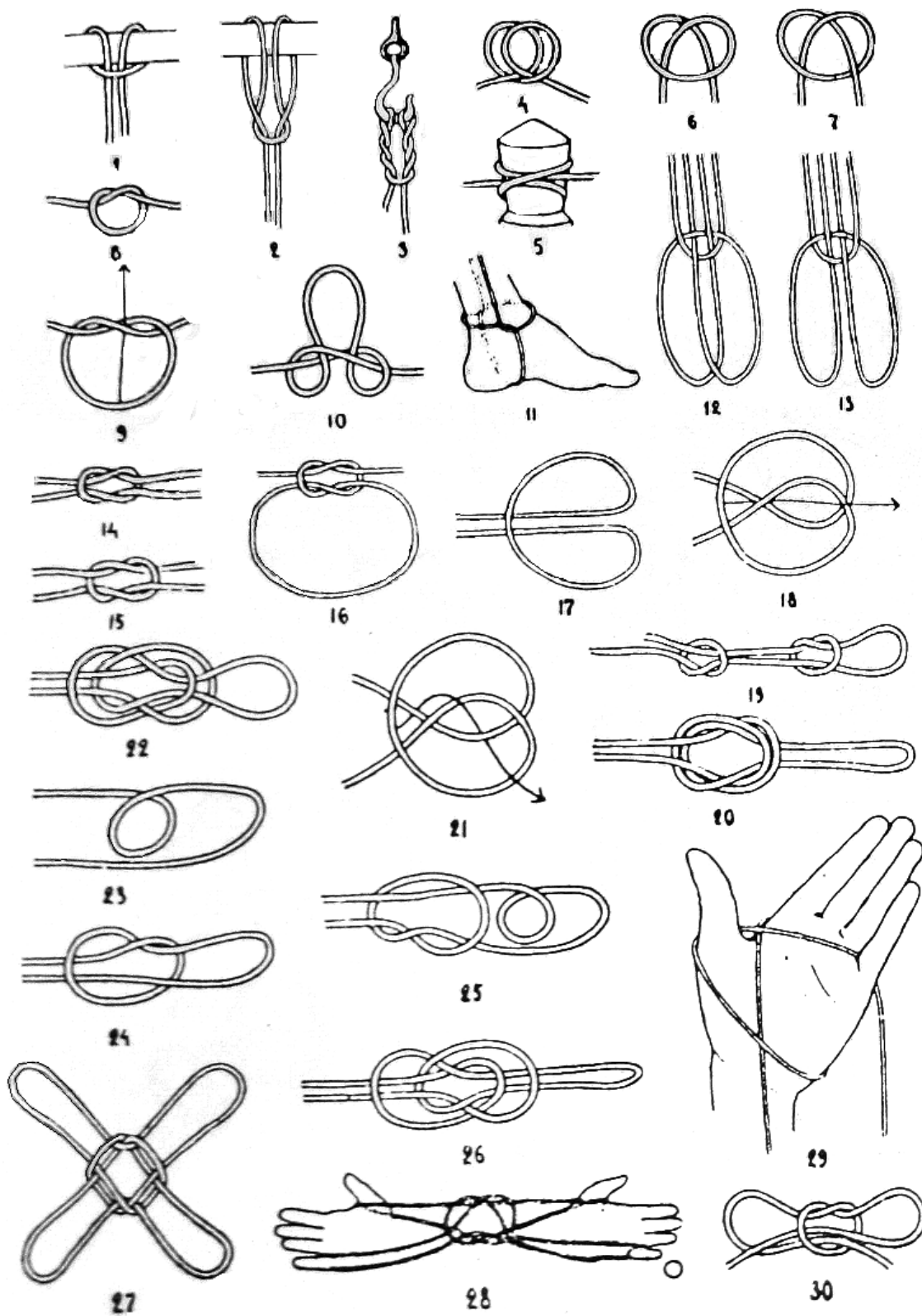
There is very much to be said about this important book [16]. Its content will significantly dominate the discussions in Parts II and III of this article.

Eranos Article (1916)

Whilst working towards a second edition of *Om Knutar*, Öhrvall came across the 1851 edition of Bussemaker-Daremberg's *Œvres d' Oribase*. Hjalmar was quick to notice that a subset of the morbid illustrations did not match the structures, which the original Greek textual descriptions would give rise to. In order to find the structures, which the ancient Greek doctor Oribasius had intended, He approached the subject, "not as linguist, but as an interested sailor", although he did secure help from Dr. Ernst Nachmansson, whom he acknowledges. His results, which are given on the next page, are not a proper representation of the Oreibasius' structures. We shall return to them in Part III of this article.

Oreibasius' encyclopaedia appears to have covered a wide range of technologies of which the 18 knots and slings were a small part. Öhrvall concludes that not all of Oreibasius' structures were surgical, many of them were used both at sea and in a rural context. He was somewhat surprised to realize that Oreibasius arranged his "tension-machines" not according to their structure, but by their application [17, p79]. Interesting to note are the absence of the Ligature Knot [1, p221, #1209], yet the presence of 4 distinct tying methods for the Jug Sling Knot!

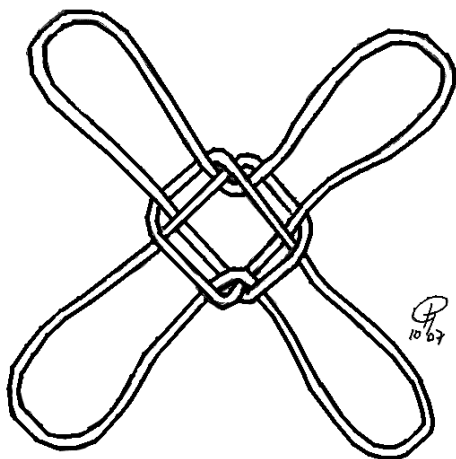
It is uncertain what motivated Hjalmar Öhrvall to publish his results in the scientific magazine of *Eranos*. I surmise he realized his paper, "*Något om knutar i antiken, särskildt hos Oreibasios*", would not fit into his 1916 edition of *Om Knutar*, which, moreover, was written for a different audience.



Oreib. n:r

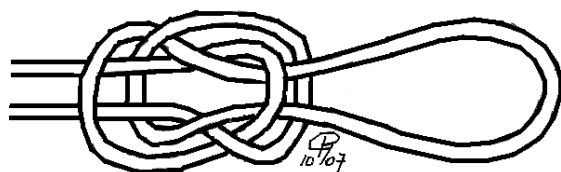
Svenska Dagbladet Article (1922)

After a period of quietness Hjalmar Öhrvall wrote about knots once more. In the Sunday edition of the newspaper *Svenska Dagbladet* of february 5th he shared his views on the ethnographical significance of knots and stringfigures. He had gotten hold of a copy of Walter Rouse Ball's work (*String Figures – an amusement for everybody*) and was sympathetic towards its ethnographical approach. He apparently decided to word some of his ideas on the finding, the usage and the spread of knots. He writes about stringfigures from Lapland and identifies them in Rouse Ball's book [7, p13, p52]. He also notes links to Oreibasius' *Plinthios* shown below.



He remarks that, although distinct stringfigures may be known by various names in different locations, it is quite noteworthy that such complex structures have managed to become independent discoveries in time and space. He pulls in cultural interaction and education in an attempt to explain the propagation of knot knowledge.

Öhrvall makes an interesting move towards the Jug Sling Knot. In *Om Knutar* (1916) he had already mentioned 8 different ways of making this structure [17, p96-104]. He had learnt 3 from sailors, dredged 2 from "seamanship" manuals and bumped into 3 others during his studies of Oreibasius' works.



He concludes that this peculiar knot, with its many different, yet pronounced, tying methods, illustrates that identical knots have been independently invented in different places and times.

His final call to his public was to undertake an effort to preserve knotting knowledge locally and persuade Swedish scientific expeditions directed to far away lands to collect knots and stringfigures. He realized this would be a tremendous task and suggested to start off with a study of hitches. He believed that the diversity of solutions to this confined, yet practical, ropeproblem would offer sufficient richness for investigations.

Overview Öhrvall's collected knot works

Hjalmar Öhrvall nurtured many ideas about knots and he addressed a large part of them. They ranged from the form and function of knots to their presentation, covered historical and educational aspects, were tainted by his academic approach and touched sociological aspects. The short-list of his collected knot works is covered by 6 book(let)s and articles. His first knot-publication appeared relatively late in life, followed by a string of smaller publications till the big bang of the very productive year 1916. Here we got an initial taste of *what* he wrote and *when* he did so. Lets us concoct a crude overview.

Representation. As mentioned above, he was taken by the early days of photography. This reflects from the terrible images in his earlier works. He photographed rope-knots on glass plates suspended above sheets of white paper to prevent shadow-formation. However, for multistrand knots he resorted to lead wire, as real-rope specimen resulted in even more deplorable imagery. It is fair to conclude that photographic imaging in his knot works was no success. As a rule, he obtained small images of poor resolution. Gradually he secured help from his daughter Elli Öhrvall to do the line drawings. But in general, as a staunch believer in the power of the written word, he rather resorted to eloquent textual descriptions to convey his thoughts.

Education. Öhrvall believed that knot knowledge was a prerequisite for solving practical, everyday tasks. He saw himself as a public educator and strongly believed the written word was the medium to educate the masses. He suggested to teach knot tying in schools and urged his readership to make knotboards to aid remembering the structures and their names [16, p2, p5].

Sources and fieldwork. The basis for his fieldwork is very diverse. He occasionally mentions trips to museums and holidays. He (and also his children) collected knots during their vacations and small-talking with passers-by. He critically studied knots in books in any language, which he could lay his hands on, and compiled one of the first international

glossaries. He urges his readership to study knot structures in order to comprehend their workings. His earliest work is by and large about rope-working techniques and practical knots, but is seen to evolve towards facets which no longer touch the form and function of individual knotted structures.

Epilogue

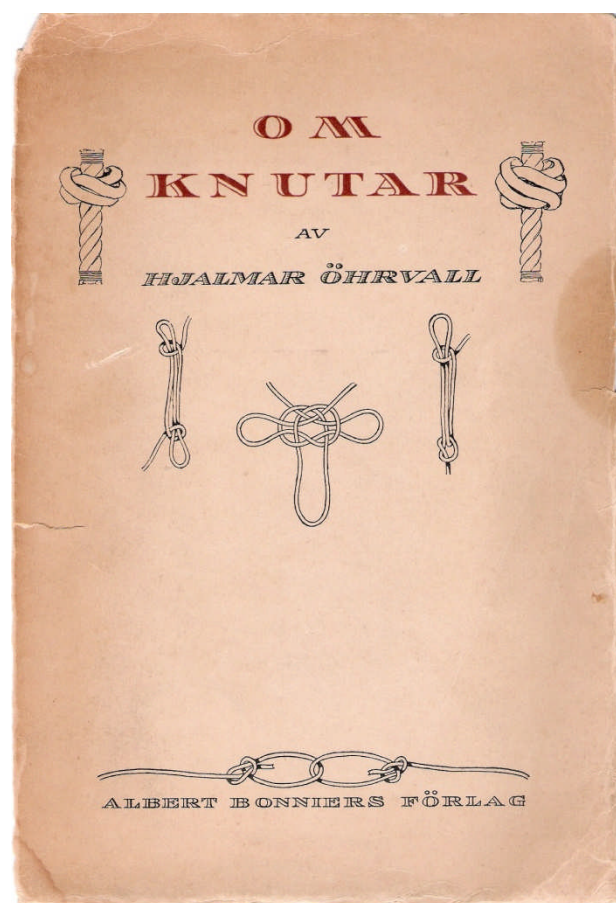
Shying away from his professional career as a socially engaged physiologist at Uppsala University and restricting the view to his work on knots, our conclusion can only be that Hjalmar Öhrvall was an outstanding thinker. In the foregoing we have seen that he was the first knot-author, who was sufficiently courageous to supply non-superficial bibliographies and undertake the compilation of an international glossary. In short he tried to get knot-research on a straight keel. There is little doubt – in my mind - that Hjalmar Öhrvall's work resulted in a timeless culture-historical document on knots.

It is impossible to write a small article on Hjalmar Öhrvall and his knots. He managed to transmit an undeniable signal, ringing loud and clear, from the Scandinavian knot world. Unfortunately, by and large, references in the knotting literature stayed out. In the third installment of our article we shall see *how* and *why* this presumably came about. In the sequel to this article we shall lay the foundation for our study of the ripples his impact propagated across the Knot Knowledge Management pond.

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21. <http://commons.wikimedia.org/wiki/Image:Hjalmar.ohrvall.jpg>.

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Stiphout October 2007.

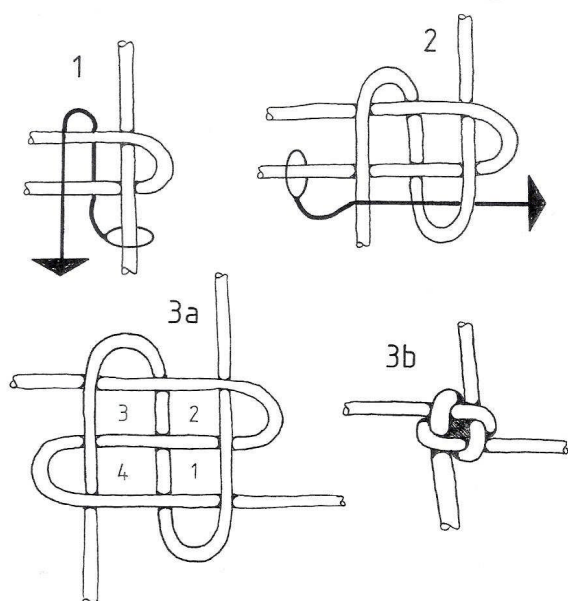


Square Knot (Crowned)

written by 'Jack Fidspike'

illustrated by Geoffrey Budworth

The knot depicted is one I have grown up referring to as 'the Square Knot' (despite any complication this might cause with those who know a Reef Knot by that name) but it is actually the Chinese Crown Knot (ABOK #808) or Good Luck Knot. Anyway, tie it as illustrated. The resulting layout (3a) can be tightened to make the compact button-like two-strand lanyard knot (3b). Instead, leave it loose and mentally number the four inner compartments as shown.



Fig's 1 to 3

Bring the upper left-hand strand across, left to right, and tuck it down through space number one.

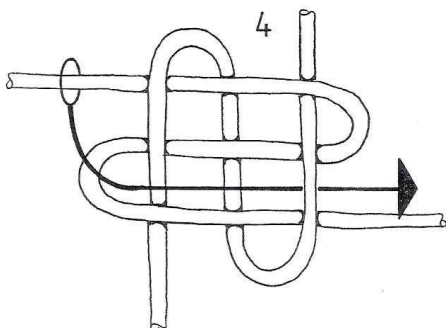


Fig. 4

Bring the bottom left-hand strand across, left to right, and tuck it down through space number two.

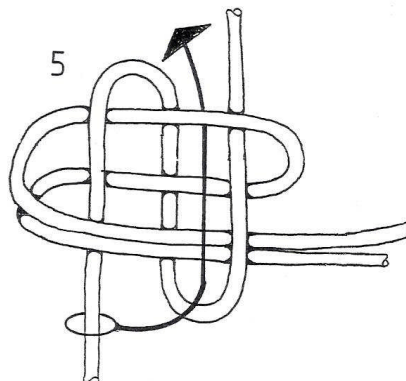


Fig 5.

Bring the lower right-hand strand (so far unused) across, right to left, and tuck it down through space number three.

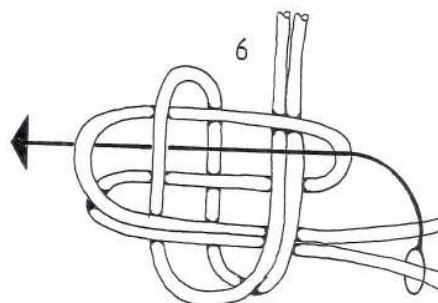


Fig. 6

Bring the upper right-hand strand (so far unused) across, right to left, and tuck it down through space number four.

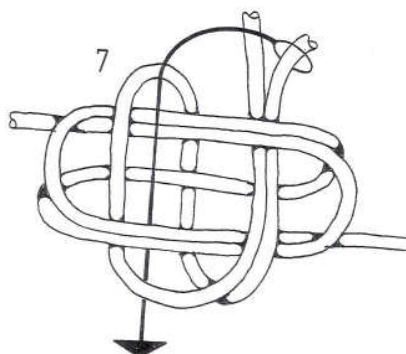
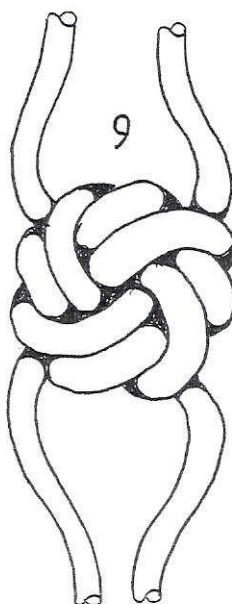


Fig. 7

Diagram 8 shows a complex knot with multiple crossings, labeled '8' at the top. The knot is formed by a single strand that weaves through several loops, creating a dense, spherical structure with many intersections. The strand enters from the left, forms a large loop on the right, and then weaves through several horizontal and vertical strands before exiting to the right.

There are, I admit, more than enough ornamental knots, but here is yet another one (justified perhaps by its chunky simplicity).



Turk's Head Calculator

by Darrell Ausherman

This spreadsheet calculates for a given Turk's Head Knot (L x B), (1) the *two* expanded THKs that result when a) following the lead *after* (outside) the standing part and b) when following the lead *before* (inside) the standing part and (2) the THK that when expanded results in the given THK.

The results are *not* explicit – you have to interpret the results by looking for before and after expansions that are intergers with no common divisor.

I use the program to calculate what a given THK expands to using the split lead method and the THK you need to expand from to get the given THK. The B and L are entered into the upper left and the results are calculated. The solutions are given by the first pair of integers with no common divisor. The standing part is on the left hand side of the knot. The split lead follows either *above* (to the left) of the standing part or *below* (to the right) of the standing part.

It would help if you read P.v.d.Griend, "A Simple Expansion Technique for Turk's Head Knots", *Knot News*, issn 1554-1843, No. 11, June 1998.

L	B
5	14

L = Number of leads
B = Number of bights

$$m = \text{integer} = 1, 2, 3, 4, \dots$$
$$na = (m \cdot L + 1) / B$$
$$nb = (m \cdot L - 1) / B$$
$$L_{exp}(na) = L + 2 \cdot na$$
$$L_{exp}(nb) = L + 2 \cdot nb$$
$$B_{exp} = B + 2 \cdot m$$

$$|s(na)| \equiv |s| - 2 \cdot na$$
$$Ls(nb) = L - 2 \cdot nb$$
$$ES(115) = E + \sum_{i=1}^n 115$$

"a" refers to an after-crossing-the-standing-part start

"b" refers to a before-crossing-the-standing-part start

L	B
5	14

[illegible]

Whale Festival

The PAB attended the Whale Festival in Dana Point Harbor, California over the weekend of March 8th and 9th. Just as we were setting up a nice lady, Doreen Darnell, stopped by to admire our display. After chatting for a while, she took some pictures and offered to send us copies. And here they are:







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30 April 2008

Hello PAB Member,

With the help of many people over the years, our *Knot News* has been a showplace for an assortment of different knot articles, letters, drawings and photos for the pleasure of the PAB membership and its friends. There were times past when I wondered what I would draw on to publish next when, out of the blue, an article would arrive for publication. I have said this before but I must especially thank both Pieter van de Griend and Roy Chapman for going above and beyond in breathing life again and again into these pages.

But my file of useful articles is running dry and my request for new material has gone unanswered. That is except for Mr. van de Griend, whose flow of words seems inexhaustible. Others cannot seem to find the time or expend the effort to contribute. I was especially hoping to get more homegrown talent to fill these pages and not have to rely so much on Europe for our pieces. Believe me, no one is more appreciative of the many pieces I have printed over the past year than I, but it would be great to refocus at least some of our newsletter on local Branch events and news.

I have always liked to think of our newsletter as a reflection of the Branch, its doings and interests, but I need the input from the members to know what is going on and to have them put on paper their actions and achievements. Without some help from you out there I am not sure the *Knot News* will be able to continue. It is a simple truth that if nothing is sent in for me to publish there is nothing for me to print.

My compliments to all in the PAB and I hope to have sparked your interest in helping to continue this important link between the members.

Take care till we talk again.

Yours in knotting,

Joseph Schmidbauer
Editor, *Knot News*