

The Identification of a Plant in the Unicorn Tapestries

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IN 1938, Eleanor C. Marquand's now classic study of the flora of the Unicorn Tapestries at The Cloisters excited considerable interest.¹ Her careful investigation resulted in the identification of forty-six species of plants. Three years later, E. J. Alexander and Carol H. Woodward, in a similar study,² determined an additional thirty-eight of the 101 different plants represented in the seven tapestries. Their "Checklist of Plants in the Unicorn Tapestries"³ has withstood the test of time and, to date, no new floral identifications have been published.

That so many species of plants in the seven late fifteenth- and early sixteenth-century Unicorn Tapestries could be accurately identified by twentieth-century plant scientists speaks volumes for the powers of observation of the designers (and weavers) of these works, and of so many other tapestries dating from the period just before the development of what has come to be called "science." In a very real sense, as I have observed elsewhere,⁴ botanical depictions in tapestries involved more than just a touch of scientific investigation. It is clear that, in Northern Europe, botanical representation such as that in the Unicorn Tapestries was an important step toward the later scientific study of plant life.

There were a number of herbalists at the time these tapestries were woven, but by no means all of their botanical depictions were as accurate as those in the Unicorn Tapestries. Many herbalists were still recopying works of the ancients rather than observing the plants themselves. It is plain, however, that the designers of the Unicorn Tapestries went directly to

the source for their inspiration, although they in no way allowed scientific accuracy to diminish the artistry of their creation.

Alexander and Woodward's attention was especially captured by an unusual plant that appears only in *The Start of the Hunt* (Figures 1, 3) and *The Unicorn in Captivity* (Figures 2, 4), the first and seventh tapestries in the series. Both were woven in the millefleurs style, which differentiates them from the other five tapestries, in which a more natural style was used. The plant was found once in the first tapestry and twice, in a different mode of design, in the seventh. Of this little-known plant, the authors wrote:

A unique flower (or fruit) in the seventh tapestry has proved annoyingly intriguing. It is a plant of rosette growth with stalks bearing peculiarly drooping structures, each like a saucer held on edge with battlemented borders, the "saucer" attached in one case near the center, in another near the top. This same thing appears in fragmentary form but different color in the first, but both are completely unidentifiable. It is one of several small plants to which no clue can be found.⁵

1. Eleanor C. Marquand, "Plant Symbolism in the Unicorn Tapestries," *Parnassus* 10, no. 5 (1938) pp. 3-8, 33, 40.

2. E. J. Alexander and Carol H. Woodward, "The Flora of the Unicorn Tapestries," *Journal of the New York Botanical Garden* 42 (1941) pp. 105-122.

3. Idem, "Checklist of Plants in the Unicorn Tapestries," *Journal of the New York Botanical Garden* 42 (1941) pp. 141-148.

4. Lawrence J. Crockett, "Art, Science, and the Unicorn Tapestries," *Connecticut Journal of Science Education* 20 (1982) pp. 2-8, ill.

5. Alexander and Woodward, "Flora," p. 111.



1. *The Start of the Hunt* (box shows detail reproduced in Figure 3). The Metropolitan Museum of Art, The Cloisters Collection, Gift of John D. Rockefeller, Jr., 37.80.1

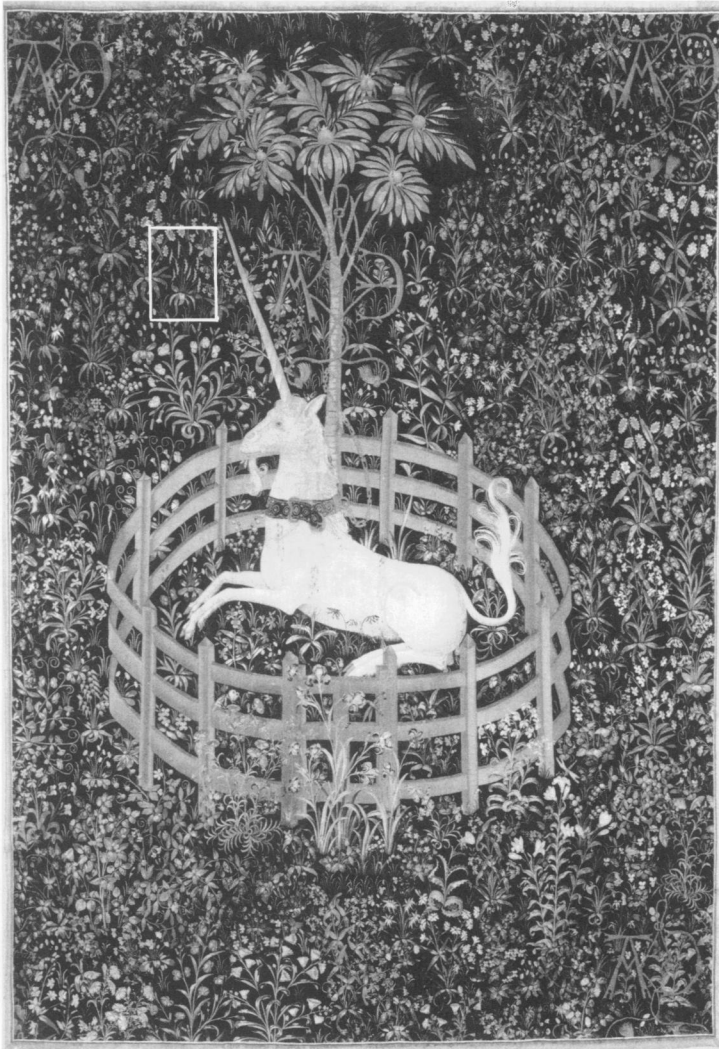
There is, however, another representation of this plant in the first tapestry, apparently overlooked by earlier investigators. What is especially interesting is that it is depicted in the style used for its representation in the seventh tapestry. The first tapestry thus contains two very different representations of this plant. The newly discovered plant has only two stalked structures, one attached at its end and, therefore, pendulous, and the other attached at its middle. That is all there is to be seen of it. When one faces the tapestry, it is to be found to the right of the earliest reported plant, shown in fragmentary form near the right edge of the tapestry, immediately above the red-flowered stock and below the blue-flowered violet (see Figure 3). In both tapestries and in both styles of design, the plant is intriguingly mysterious and invites further study.

That the unusual plant is not unique to the Unicorn Tapestries has been revealed by a study I undertook at the Metropolitan Museum and at The Cloisters of other tapestries of approximately the same age, design, and manufacture. A similar plant is to be found in *Falcon Hunt*, in the Robert Lehman Collection,⁶ and in *The Instruments of Christ's Passion*⁷ (Figures 5–8). *Falcon Hunt* is richly laden with plants in full flower or fruit, and the plant in question occurs not once or twice, but seventeen times. It is, indeed, the most frequently repeated species in this work. Four clear examples are to be found in *The Instruments of Christ's Passion*, although they are more primitively

6. In a personal communication, Dr. George Szabo, curator of the Robert Lehman Collection, wrote, "We do not know whether it [*Falcon Hunt*] is a single piece or part of a series. It is my feeling it was part of a series in which the others could have represented hunts of other kinds. I might add that some visiting tapestry scholars expressed the same opinion."

7. *The Instruments of Christ's Passion* was once owned by the duke of Valencia and is of late 15th-century manufacture, probably in Brussels. It was used as an altar cloth.

2. *The Unicorn in Captivity* (box shows detail reproduced in Figure 4). The Metropolitan Museum of Art, The Cloisters Collection, Gift of John D. Rockefeller, Jr., 37.80.6



3. *The Start of the Hunt*, detail of Figure 1



4. *The Unicorn in Captivity*, detail of Figure 2

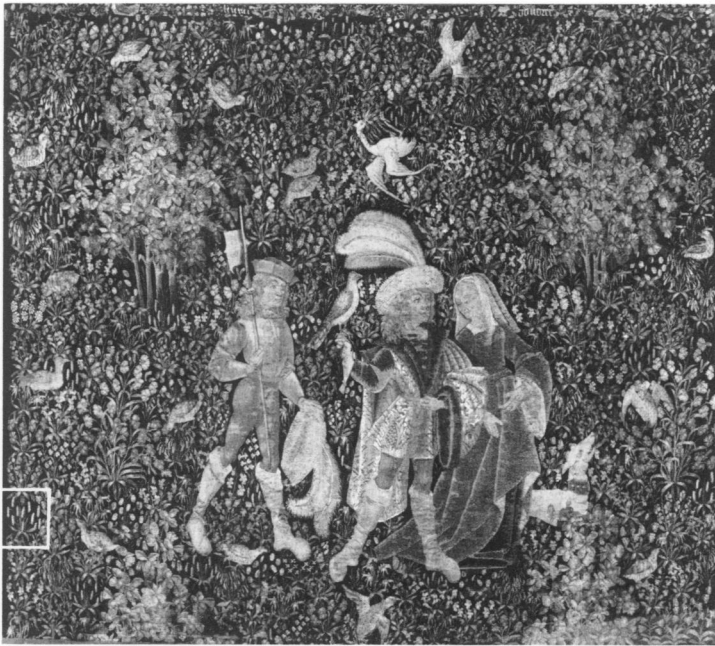
executed than those both in the Unicorn series and in *Falcon Hunt*. Thus we have a new and somewhat different version to provide additional visual confirmation of the existence of the plant and to assist in its botanical analysis.

In our effort to identify the still-unnamed plant, it must first be determined whether the pendulous structure on it is a fruit, a flower, or a flower cluster. To do this we must consider the botanical definition of a fruit. A fruit is a ripened or mature ovary, the lowest part of the female organ of floral reproduction at the center of the flower (Figure 9). Before pollination and fertilization, the ovary contains ovules that, following fertilization, mature as seeds. The ovary is attached at its base to the receptacle, which is part of the stem. The position of attachment of a fruit becomes crucial in analyzing the pendulous structures seen on the plants we are considering.

In all, there is a total of 190 examples of the pendulous structure in the four tapestries in which the plant appears (Table 1). Of the 190 pendulous structures, 183 are attached at their bases, seven equatorially; of the latter, one example appears in the first and six in the seventh tapestry of the Unicorn series. The central or equatorial attachment occurs only in the Unicorn Tapestries.

The presence of this plant in *Falcon Hunt* and the frequency of its use there help to remove some of the ambiguity engendered by its apparently less careful depiction in the Unicorn Tapestries, and permit more accurate determination of the botanical nature of the plant and the unusual pendulous structures. In the Unicorn Tapestries the pendulous structure is seen a total of nineteen times. In thirteen examples, the structure is bilaterally crenellated; in the other six, it is unilaterally crenellated. All thirty-seven structures in *The Instruments of Christ's Passion* are bilaterally crenellated and all are attached at their bases, while in *Falcon Hunt* only twenty-six of the 134 pendulous structures have unilaterally crenellated margins; the others are bilaterally crenellated. Both types, however, are attached only at their bases (Table 1, cols. 4-6).

Alexander and Woodward described the structures as "each like a saucer held on edge with battlemented borders"; that is, suggestive of a daisylike flower (or composite as it is known to botanists), which is found in the first tapestry—a hawkweed of the genus *Crepis* (Figure 10)—and which bears a similarity

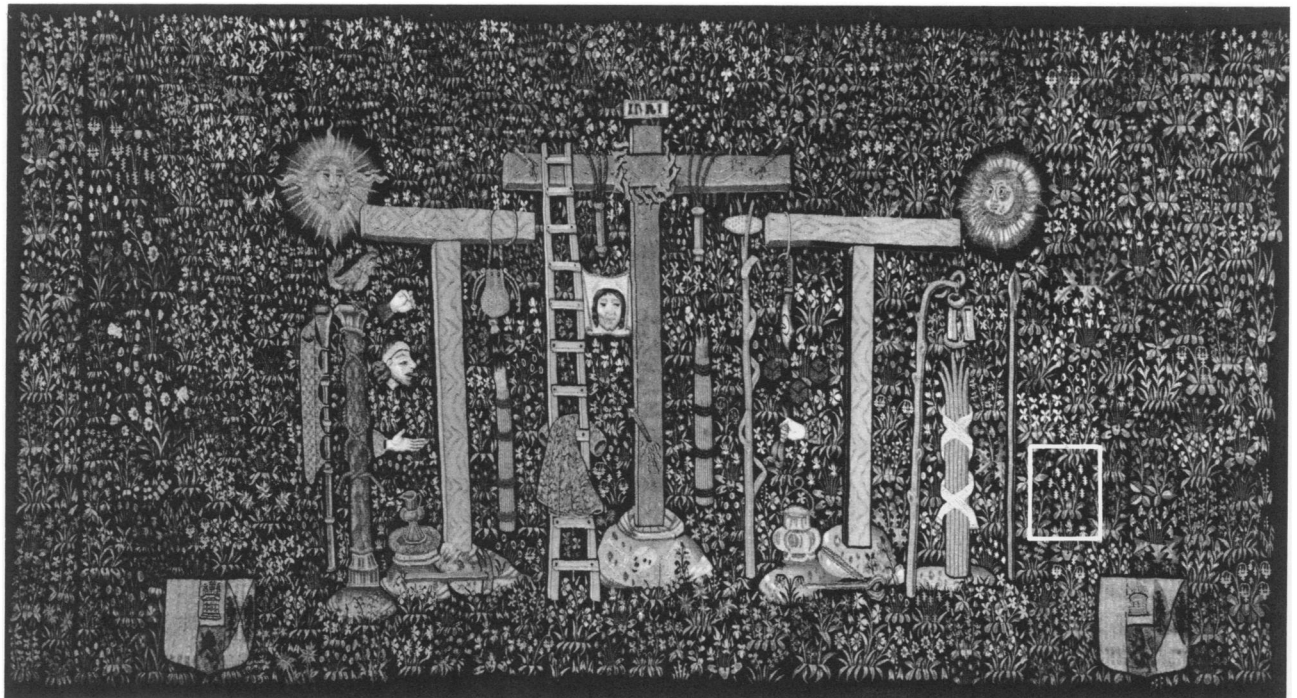


5. *Falcon Hunt* (box shows detail reproduced in Figure 7). The Metropolitan Museum of Art, Robert Lehman Collection, 1975

6. *The Instruments of Christ's Passion* (box shows detail reproduced in Figure 8). The Metropolitan Museum of Art, The Cloisters Collection, The Cloisters Fund, 52.34

to the plant in question. In the tapestry, the flowers are turned sideways but all of them show a smooth lower surface, with the familiar slight bulge where the flower is attached to the stem (similar to the shallow type of champagne glass). The petaled upper surfaces are shown precisely where they are to be expected. Combining this with the fact that most of the plants under discussion have their pendulous structures attached at their bases, one must conclude that our plant, whether with bilaterally or unilaterally crenellated borders, is not a flower.

Another possibility is that the pendulous structures represent the many-flowered inflorescence of a grass known as *Briza maxima*, or big quaking grass (Figure 11). In *Briza*, the flower cluster (known as a panicle) is relatively large and pendant, often 12 millimeters long and 10 millimeters broad, and the pedicel (attachment of the flower cluster) is slender and drooping. The flower clusters are purplish or brown-margined, much resembling in color those seen in the seventh tapestry of the Unicorn series and in *Falcon Hunt*. While this would appear to suggest a solution to the mystery, the overall composition of the pendulous objects in the tapestries differs from that of the living flower clusters. The floral cluster of *Briza* tapers and is sometimes as wide as it is long, neither of





7. *Falcon Hunt*, detail of Figure 5



8. *The Instruments of Christ's Passion*, detail of Figure 6

which conditions obtains in the tapestry plant. Nor do the crenellations in the latter match the overlapping or imbricated arrangement of the individual florets of the living plant. In many of the drooping objects, as represented in the tapestries, there is a distinct vertical central region or line (usually differing in color from the margins). This does not exist in *Briza's* inflorescence, in the center of which is a succession of horizontal lines caused by the imbrications of the individual florets. As a consequence of all

9. (LEFT) A longitudinal section of a generalized flower. Note the three parts of the pistil: *stigma* (uppermost) on which pollen lands, *style*, joining the stigma to the lower portion, the *ovary*. Within the ovarian cavity are *ovules* (the future seeds). The ovary will mature as the fruit after pollination; the style and stigma will wither. (RIGHT) Drawing of a legume, the mature ovary of the pea plant (*Pisum sativum*), with the seeds (matured ovules) lined up along one edge inside. At the top are seen the withered remnants of style and stigma (drawings: Ricki Cutler)

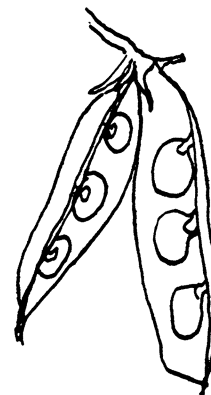
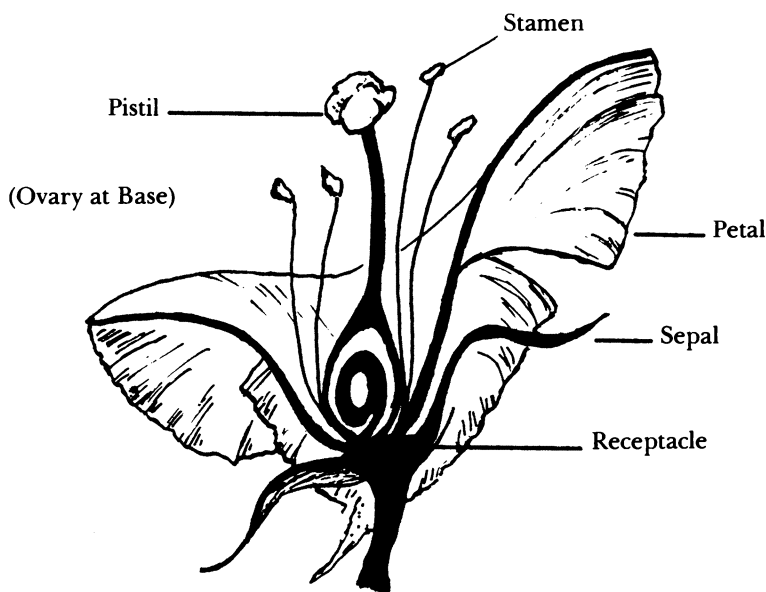


TABLE 1 Characteristics of the Plant

Tapestry	Number of Plants	Number of Pendulous Structures	Bilateral Crenellation	Unilateral Crenellation	Basal Attachment	Central Attachment
REPRESENTATION IN FRAGMENTARY STYLE						
<i>Unicorn First</i>	1	2	2	0	2	0
<i>Instruments of Christ's Passion</i>	4	37	37	0	37	0
Subtotal	(5)	(39)	(39)	(0)	(39)	(0)
REPRESENTATION IN MORE REALISTIC STYLE						
<i>Unicorn First</i>	1	2	1	1	1	1
<i>Unicorn Seventh</i>	2	15	10	5	9	6
<i>Falcon Hunt</i>	17	134	108	26	134	0
Subtotal	(20)	(153)	(119)	(32)	(144)	(7)
Grand Total	25	190	158	32	183	7

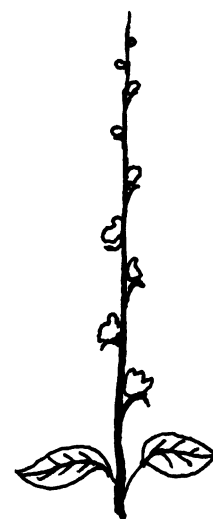
10. *The Start of the Hunt*, detail of Figure 1, showing hawkweed



11. The inflorescence of big quaking grass, *Briza maxima* (drawing: Ricki Cutler)



12. A generalized spike (drawing: Ricki Cutler)



these dissimilarities, one is led to the conclusion that the plant depicted in the tapestries is not *Briza maxima*.

This leads us to the next flower-related possibility. The structure in question may have been meant to represent a cluster of flowers known botanically as a spike. A spike is an inflorescence with an elongated axis (main stalk) that bears scattered single flowers that are sessile, or directly attached to the base (Figure 12). The flowers of a spike bloom from below and the blooming progresses toward the growing top of the spike. Thus this inflorescence tapers in width, from a wide base to a narrow top. Since none of the drooping structures in the tapestries shows tapering, we must eliminate spikes as a possibility.

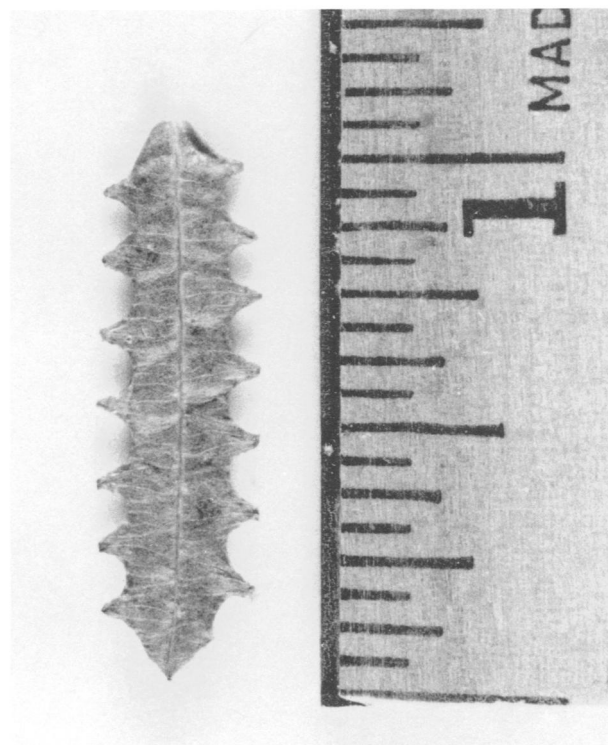
Having disposed of the alternatives, we are left to consider the proposition that the pendulous structures are, finally, fruits and, in particular, that they are a specific fruit known as a legume. A legume (see Figure 9, right) is a fruit that is dry when mature and, generally, though not always, dehiscent. Legumes, if they open at maturity, dehisce, or split, along two lines. A familiar example is the pea pod. Leguminous fruits are borne by a very large tribe of dicotyledonous flowering plants known as the Leguminosae (pea or bean tribe). This group embraces some 5,000 species, many of vast economic importance.

Having examined leguminous plants with drooping, bilaterally crenellated fruits, like those to be seen in the tapestries, I have concluded that the plant under discussion can, at least tentatively, be identified as the sawfruit plant, *Biserrula pelecinus*, which is, indeed, a member of the bean tribe (Figure 13). O. Polunin and B. E. Smithies have described it as follows:

Biserrula pelecinus L. A small plant with clusters of bluish or pale yellow flowers with blue tips that can be mistaken for no other species on account of its unique fruits which look like two-edged saws [emphasis added]. Leaves with 7–15 pairs of oblong, notched leaflets. Sandy, arid places. S. Portugal, Med. Region.⁸

The common name in English, sawfruit, is similar to that in Portuguese, *serradella larga*, long little saw.

In a recent botany textbook, the sawfruit was likened to a centipede in shape.⁹ The authors suggested that the fruit may represent an example of plant mimicry. Certain species of birds that feast on centipedes mistake the fruit because of its shape and pluck it from a plant. Then, learning their error, they drop it some distance from the source, thus aiding in the



13. A single fruit of the sawfruit, *Biserrula pelecinus* (photo: Allen Rokach, The New York Botanical Garden)

spread and migration of the species. The woven fruits in the seventh Unicorn Tapestry and, even more so, in *Falcon Hunt* do indeed remind one of centipedes (or caterpillars).

It is obvious that only the fruit of the plant represented in the four tapestries is similar to the botanical description of *Biserrula pelecinus*, while the vegetative portions depicted do not even vaguely match it. This discrepancy may have occurred because the sawfruit plant does not grow in Northern Europe, the home of most of the plant species shown in the Unicorn Tapestries. The fruit, dry at maturity and hard to open, could well have been transported to the north, where, being striking in appearance, it would have caught the attention of anyone interested in plants. There would, however, have been no way of matching up the rest of the plant when trying to illustrate

8. O. Polunin and B. E. Smithies, *Flowers of South-West Europe* (New York, 1973).

9. R. C. McLean and W. R. Ivimey-Cook, *A Textbook of Theoretical Botany II* (New York, 1956).

it. It is also possible that Portuguese designers and/or weavers, familiar with *seradella larga*, migrated northwards, carrying with them their knowledge of the plant.

The conclusion that the plant is a sawfruit plant is not necessarily weakened by the faulty depiction of the foliage. This is not the only plant in the two millefleurs-style Unicorn tapestries of which the fruit is depicted correctly while the vegetative portions are quite inaccurate. At the center of the seventh tapestry, *The Unicorn in Captivity*, is a beautiful pomegranate tree. Its fruit is both superbly designed and accurately depicted, but the remainder of the tree is fanciful. This is particularly strange because another pomegranate tree, which appears in the third tapestry, *The Unicorn Tries to Escape*, is botanically accurate.

It is an established theory that the first and seventh tapestries were not part of an integrated series. Basing my opinion on the evidence provided by the plant disparities, I feel convinced, as a botanist, that this theory is indeed correct. Certainly, no sawfruit plant occurs in tapestries not woven in the millefleurs style, whereas it does occur in both tapestries of the Unicorn series done in this style, and in the other two tapestries as well. Floristically, the four millefleurs tapestries are similar, while the second, third, fourth, fifth, and sixth tapestries of the Unicorn series have an entirely different style of botanical treatment.

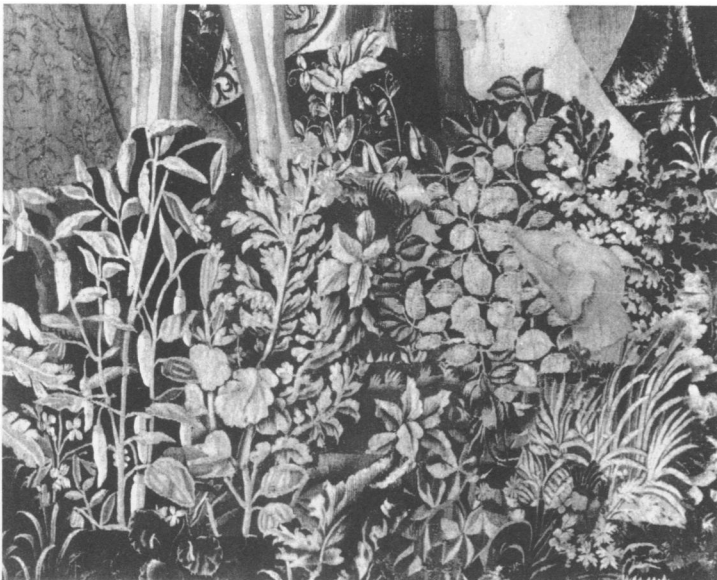
There is another example of a bean tribe plant to be found in the Unicorn Tapestries—a pea plant, *Pisum sativum*, which appears in the sixth tapestry, *The*

Unicorn Is Killed. John Williamson has described this plant as one of the “most significant plants in the tapestry series” from the viewpoint of symbolism.¹⁰ However, since the pea plant appears in a section of the work (Figure 14) which has, for reasons not fully known, been repaired and added to the main body, its presence does not carry any significant weight in this discussion. The reworked portion of the tapestry is very interesting botanically and even zoologically. As such, it is a subject full of potential that must be explored in another paper.

In the final analysis, since the area containing the pea plant was reworked, it seems apparent that the legume-bearing plant with the intriguing and unusual pendulous structures was, indeed, the only member of the bean tribe depicted in a Unicorn tapestry in its original form.

The discovery that the sawfruit was used in other millefleurs-style tapestries of similar age and manufacture suggests that it may have been popular with the designers of this style of work. One can only speculate as to the symbolism which led to its inclusion in the Unicorn Tapestries. Scholars have clearly established the religious and secular symbolism of the plants used in the Unicorn Tapestries and have thus enriched our understanding not only of the tapestries but also of the minds that created them.¹¹ In the seventh tapestry the unicorn, symbolizing, in one interpretation, the Risen Christ, is seen triumphant in a millefleurs garden. Might not the sawfruit, reminding us of an important tool of the carpenter's trade, be one more symbol of Christ? By tradition, Christ's foster-father, St. Joseph, was a carpenter, and Christ was believed to have followed the trade in his youth. The sawfruit may have been placed in the first tapestry, *The Start of the Hunt*, to remind us, at the beginning, of Christ's suffering. It may have been included in the seventh and last tapestry, *The Unicorn in Captivity*, to remind us, at the moment of Christ's triumph over death, of his very human simplicity.

14. *The Unicorn Is Killed and Brought to the Castle*, detail showing repaired corner. The Metropolitan Museum of Art, The Cloisters Collection, Gift of John D. Rockefeller, Jr., 37.80.5



10. John Williamson, “The Oak King, and the Holly King, and the Unicorn,” *Horizon* (1979) pp. 29–39, ill.

11. Margaret B. Freeman, *The Unicorn Tapestries* (MMA, New York, 1976).