

Hybridizing Basics (Observations and data from a martagon pollen dabber)

By Frans Officer

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It wasn't so long ago, (1991) that I "discovered" the existence of *L. martagon* and its hybrids. When I first learned that they loved the open shade so prevalent in the woods around our house, I thought they might be a good candidate for our garden. When I saw my first martagon photo, I was pretty well persuaded to plant one or two. But by the time I actually saw my first martagon in bloom, things changed: I was totally smitten! Someone steered me to the North Star Lily Society (NSLS) and in 1992 I purchased my first few martagon bulbs. I was surprised to find out that not all NSLS members grew martagons (what's the matter with those people!) and there just weren't many martagon bulbs available at that time.

Someone suggested I join NALS to widen my search. I did so and in 1994 I attended my first NALS Show in Portland, OR. There were four glorious days of non-stop lily-info. I made some contacts and learned an absolutely amazing amount about lilies in general and martagons in particular. Joining NALS was probably the best thing I could have done to accelerate my quest for more martagons. In the end my efforts were successful enough to bring well over 100 different named martagon species and hybrids to my garden.

It was also in Portland that I first found out how long it takes to grow martagons from seed to flowering garden plant: an average of seven years! "What kind of lonely, anti-social, boring, nerdy, person would waste time on that?" I asked myself. Some of the answer to that question came in 1995, when I ordered martagon seed from the NALS Seed Exchange. More of the answer was revealed in 1996, when I dabbed some pollen "just to see if it would work" (guess what: it worked!) The answer to my question became crystal-clear when I started germinating most of the open-pollinated seeds I had collected in my garden the year before, and began making specifically planned, controlled crosses in 1997.



about this (we do travel to warmer climes quite a bit during our long Minnesota winters), it seems to work: I'm seeing flowers after 4 years. However, it still seems to take about 7 years to produce a mature, full-grown garden plant. Nevertheless, it's a pretty exciting time for me now, because I'm beginning to see more and more seedlings bloom each year.

It's not easy work, this martagon hybridizing. I've made countless mistakes through lack of knowledge, by experiments gone wrong, as well as by facing some occasional, generous doses of Murphy's Law (= "Whatever *can* go wrong, *will* go wrong"). It takes many additional hours to apply acceleration of the seed-to-growth cycle. With limited refrigerator space I have to harvest the bulblets when they go into the refrigerator and then replant them when they go back onto the light-stands three months later. And years have been wasted in making crosses that produced no or very few viable seeds.

Initially, I was not as diligent in keeping records as I should have been. In addition, some of the early crosses I made in 1997 and 1998 were (carelessly) mixed with seeds obtained from the NALS Seed Exchange, so bloodlines for some of the seedlings are gone forever. All too often I'm reminded of the "Pogo" comic strip's famous statement: "I have seen the enemy, and it is us!"

I finally decided to keep track of seed-production by cross made. The database I've built over the last eight years now has over 500 entries, including some OP results. It seems to give a pretty good indication as to which plants are the better pod-parents and which ones seem to have the more "potent" pollen. Of course, there are other influences at work that may well affect seed-production. I did not keep data on such things as weather in general and temperature in particular. But the relative ranking in seed-production are fairly stable among the plants I've worked with. To give you an idea of the data I keep, here are a few abbreviated sample entries from my database:

			# OF VIABLE	
YR	PODPARENT	POLLENPARENT	PODS	SEEDS
98	Amelita	Bornholm	2	14 ?
00	Claude Shride	MahBells99	3	50
00	Pink Taurade	Sarcee	3	0
04	Sutton Court	Arabian Knight	4	160

(Notes: - the "?" indicates that embryos are generally not visible and seeds may be "iffy", perhaps not viable at all;
 - the "99" behind 'Mahogany Bells' indicates freezer-saved 1999 pollen was used for this year-2000 cross;
 - 'Pink Taurade' as a pod-parent has yielded no visibly viable seeds in 11 attempted crosses over a seven year period.)

As you can see, 'Sutton Court' is clearly the champ of this group, averaging 40 viable seeds per pod. If I would have had access to such information when I first started dabbing pollen, I could have saved a lot of time by avoiding many crosses that produced no (or very few) viable seeds. I'm not saying that one should abandon crosses that provide fewer seeds. Far from it, because I'm sure there are some marvelous seedlings to be had from such crosses. But when I first started out, I wanted as many seeds as possible in order to gain germinating experience faster. If I would have had a choice, I would have concentrated on using plants that would produce a larger number of viable seeds. One of the things I learned very early (thanks, Mom!) was that if you can learn from someone else's mistakes, the learning process will be much less painful. Well, it's about eight years too

late for me to avoid those pains. But perhaps my data can help others. Beginning hybridizers may want to start with pod-parents that are more likely to produce a better-than-average number of viable seeds. So take a look at the data at the end of this article and draw your own conclusions.

Hybridizing 101

I still consider myself a “newbie” who doesn’t and probably never will do embryo rescue and test-tube culture. I guess I just prefer to see what Mother Nature and I can work out together the old-fashioned way. If you’re a seasoned, experienced hybridizer, you can probably skip this section. All others, here are some ground-rules that may help you get started.

1. Define your hybridizing goal(s). There’s nothing wrong with doing a bit of pollen-dabbing “just for the fun of it”. On the other hand, if you do have some goals in mind, put them on paper. The more specific you can be, the more direction it’ll give you in planning your crosses. Besides plant-health, vigor and flower-color, you may perhaps consider the size and direction of the flowers, as well as pedicel shape.
2. Store some pollen in your freezer. Martagons don’t all bloom at the same time. Unless you store some pollen, pollen of late-blooming plants aren’t available when earlier-blooming martagons open, and vice versa. I use the plastic, daily pill-dispensing boxes that available in just about any drugstore. Others store pollen in small envelopes. Do store the pollen in the freezer, not the refrigerator, and let it unthaw about 20 minutes before using it to make a cross. How long will the pollen stay viable? I’m not sure, but just this past year I used 3-year old pollen (from a plant I lost) to make a couple of successful crosses.



3. Practice safe sex: always protect your crosses. Pollinating critters get up a lot earlier than humans do. I tie a small baggie made of bridal-veil material over the bud the day before it is likely to open. That allows me to take my time the day the flower opens rather than rush out at the crack of dawn. More importantly, when I do get to pollinating the now open floret, I’m reasonably sure it’s my specific cross, not the work of some unidentifiable, random insect. I use a small piece of aluminum foil to protect the stigma after pollination. A number of times I’ve been told that to avoid undue stress to the plants, I should limit pollination to a maximum of three flowers per plant. At first blush that seems to make some sense. However, Mother Nature doesn’t seem to adhere to that theory. I’ve seen some natural stands of *L. michiganense* where she seems happy to produce as many big fat seed-pods as possible on every plant available. Martagons in my garden also seem to be happy to produce many open-pollinated seedpods without any ill effects the following year.

4. Keep (accurate) records. If you don't, you may be repeating crosses that haven't worked. Simply put: if a plant doesn't produce viable seed from the cross you attempted, you've lost a year until you can use that plant for another cross. So do you really want to repeat losing yet another year? If you do want to give an exceptionally promising cross another try, pollinate the very first flower that opens. If successful, the foil-covered stigma will start pointing skyward before all the buds have opened. If not successful, the stigma will continue to face downwards. Thus the stigma's direction will tell you whether you can continue with the original cross and produce a couple more pods, or use a different pollen on this plant now so that you don't lose yet another year.
5. Be able to identify seedlings and parents. Step one is to develop a logical system that identifies your seedling. It can be as simple as the year of hybridization (05), the pod-parent (Port Wine) x the pollen-parent (L. martagon). You can establish a list that abbreviates your martagon parents, so that the above seedling would be known as 05PWxLM, for example. Siblings could be "1", "2", etc. Step two is to find a dependable marking system for individual seedlings in the garden. Besides marking the individual plant above ground, I also bury a tag with the bulb. I've had excellent results with permanent marker called "Garden Marker" by DP Industries, Inc (www.dpind.com). Here in Minnesota it's available in many garden centers. Above ground, I use the marker on fiberglass electric fence posts cut to 8 inch lengths and buried next to the bulb with only an inch or two sticking up. When cleaning flower-beds in spring, rake-tines will slide right over and past the markers without pulling the marker out. Read-ability lasts at least 5 years. Below ground, I've used the marker on white plastic tags buried with the bulb (the tags look freshly written on after 4 years underground). Underground, I've also used aluminum tags (sometimes called "tree-tags") with the seedling's code scratched into the metal.



Photo: FransO

Top pod-parents

I grow a number of martagon species and have used most of them as a pod-parent. *L. martagon* and several varieties I have including *L. martagon album* have consistently produced copious seed. But using *L. hansonii* as a pod-parent with seven different pollen-parents produced almost no viable seeds at all. Only when I crossed it with 'Larissa' did I get 180 viable seeds from 5 pods. I have not used *L. tsingtauense* as a parent.

Of the named martagon hybrids, these have been the most prolific and consistent seed-producers in my garden:

1. 'Sweet Betsy', used 3 times, produced 430 viable seeds from 9 pods.
2. 'Sarcee', used in 19 crosses, yielded 2000 viable seeds from 46 pods.
3. 'Port Wine', used 9 times, produced 870 seeds from 25 pods.
4. 'Slate's Select', used 13 times, produced 1040 seeds from 29 pods.

Several other martagon hybrids have produced widely variable results for me, even when crossed with the same pollen-parent. Of these, three should be considered as pod-parents because they are excellent garden plants that can produce a good number of seeds. They are 'Claude Shride', 'Amelita' and 'Chernova'.

Unsuccessful crosses

Some named hybrids proved to be non-productive pod-parents. No viable seeds were produced using ‘Larissa’ (7 crosses), ‘Pink Taurade’ (8 crosses), ‘Theodor Haber’ (9) and ‘Tsing’ (3). One of my favorite martagons, ‘Moonyeen’, was also non-cooperative, yielding only 80 very iffy seeds from 14 crosses and 39 pods.

If you’re a newcomer to hybridizing, avoid using these lilies as pod-parents. If you want to experiment, you could try using a mixture of pollens from many different martagons on these. However, there’s an easier way to pass the desirable traits of these lilies on to the next generation.

Succeeding with pollen

What do the data show about using the pollen of the above reluctant pod-parents? Let’s take a look at the three that I’ve used.

1. ‘Larissa’, totally unproductive as a pod-parent, did yield seeds when I used its pollen. In 38 separate crosses, only 6 failed to produce seed, 6 produced 100 or more seeds, the others produced anywhere from 10 – 80 seeds each.
2. Similar results (but with fewer crosses) occurred when using ‘Pink Taurade’ pollen. In 8 crosses, 4 produced no seeds, the other 4 did. The best cross was one where I used ‘Pink Taurade’ pollen on pod-parent champion ‘Sarcee’: 140 viable seeds from 2 pods!
3. Using pollen from difficult pod-parent ‘Moonyeen’, 8 crosses produced results seven times. The best cross? ‘Sarcee’ again with 175 seeds from 3 pods.



Photo: FransO

It seems clear that a plant that is reluctant to produce seed as a pod-parent can still pass its traits on as a pollen-parent. It also seems to make sense that in such crosses, we use a hybrid pod-parent that has a track-record of better-than-average seed production (if its profile fits your specific hybridizing goals). Or use species plants as pod-parents in such crosses. Of the 38 ‘Larissa’ crosses above, species were pod-parents in 7 of them. *L. martagon album* was used three times producing 0, 0, and 17 seeds. Pollen from *Lilium hansonii* was used twice yielding 70 and 110 seeds, and *Lilium martagon* yielded a mix of viable and embryo-not-visible seeds totaling 30 and 250 respectively.

Below are the results of my hybridizing efforts (At first I was going to delete the crosses I made with un-named seedlings. How-ever, some of these crosses were with named hybrids and thus are pertinent. I finally decided to leave all data in). The first table is sorted by seed-parent, the second by pollen-parent.

**Table 1: Seeds produced
(sorted by seed-parent)**

Year	Seedparent	Pollenparent	Pods/Seeds
2000	Akimina	Port Wine	?/ 0
1999	Akimina	White Arc	2/ 0
2000	Akimina	Sprengelinchen	?/100?
1999	Akimina	Slate's Select	2/ 0
1999	Akimina	Port Wine	2/ 15
2000	Akimina	Mahogany Bells	?/ 0
1999	Akimina	Lusher	2/ 15
2000	Akimina	L.m.albifl.	?/ 5?
2005	Akimina	sdl Mar/wh edge	5/ 50?
2005	Akimina	sdl N97-02	3/ 25?
1998	Akimina	Puenktchen	2/ 0
1997	Amelita	Mahogany Bells	?/ 65
2004	Amelita	sdl N97-02	3/ 90
2004	Amelita	sdl N96-07a	1/ 35
2004	Amelita	sdl N95-03a	3/ 40
2005	Amelita	sdl N96-08a	no dice
1997	Amelita	Glacier	?/ 50
2000	Amelita	L.m.album	2/ 50
2004	Amelita	sdl NM134846	3/110
2001	Amelita	Mahogany Bells	?/ 75
2004	Amelita	Morellentsing	6/110
2001	Amelita	Ozelot	?/ 30
1998	Amelita	Ozelot	2/ 0
2000	Amelita	Port Wine	?/ 0
1999	Amelita	Port Wine	2/140
1998	Amelita	Sprengelinchen	2/ 22
1999	Amelita	White Arc	3/ 0
2001	Amelita	Whitewood	?/ 50
2000	Amelita	Larissa	?/ 30
2005	Amelita	Maroon King '01	no dice!
2002	Amelita	sdl NM134846	?/ 40
2000	Amelita	L.m.albifl.	?/100?
2002	Amelita	White Arc	?/ 50
2005	Amelita	Ozelot '01	5/ 23?
2005	Amelita	sdl (OzxPW)	2/ 25
2005	Amelita	sdl (SISelxPW)	4/ 90
2005	Amelita	pnk2	
2005	Amelita	Random Bliss	4/ 70
2004	Amelita	Sarcee (drkr 1)	3/ 90
2004	Amelita	U-forgot-to-tag	3/ 85
2002	Amelita	sdl CrmGrn	?/ 50
2001	Arabian Knight	Charlene	?/ 50
2000	Arabian Knight	White Arc	?/ 40
1999	Arabian Knight	White Arc	2/ 15
1998	Arabian Knight	Sing Out	2/ 2

1999	Arabian Knight	Port Wine	?/ 8?
1999	Arabian Knight	Mrs RO Backhouse	3/ 35
1998	Arabian Knight	Larissa	3/ 22
1999	Arabian Knight	Larissa	2/ 10
2001	Arabian Knight	L.hansonii	?/ 75
2000	Arabian Knight	Cherry Marble	?/ 80
2004	Arabian Knight	White Arc	3/ 25
2000	Arabian Knight	Larissa	?/ 25
1998	Attiwaw	Puenktchen	2/ 3?
2004	Attiwaw	Port Wine	3/ 50
2000	Autumn Color	JS Dijt	?/ 80
1999	Autumn Color	White Arc	?/ 65
2000	Autumn Color	sdl HH1 ylw	?/ 70?
1997	Bendick	L.m.album	?/ 2?
2001	Bendick	Ozelot	?/ 1?
1998	Bendick	Ozelot	2/ 0
1997	Bendick	Port Wine	?/ 25
1998	Bendick	Sprenkelinchen	2/ 6?
1999	Bendick	White Arc	2/ 12
2005	Black Prince	Random Bliss	no dice!
2005	Black Prince	Morellentsing	3/ 90
1999	Bornholm	Larissa	3/100
1999	Bornholm	Slate's Select	2/ 0
2000	Brocade	Sprenkelinchen	?/ 0
2000	Brocade	Port Wine	?/ 35
1998	Brocade	Puenktchen	2/ 4?
2000	Brocade	White Arc	?/ 70?
1999	Brocade	White Arc	3/ 28
1999	Brocade	Ozelot	2/ 20
1998	Brocade	Ozelot	2/ 17?
2000	Brocade	Ozelot	? 50
2000	Brocade	L.m.albifl.	?/ 13
1998	Brocade	Amelita	?/100
1997	Brocade	Amelita	?/ 75
1999	Brocade	Pink Taurade	2/ 0
1999	Brocade	Port Wine	2/ 15
2004	Burnt Orange	OP	6/150
2004	Burnt Orange	sdl ERM 03	4/140
2004	Burnt Orange	Morellentsing	3/100
2004	Carolyn Rollison	OP	12/999
2000	Carolyn Rollison	OP	?/350
2005	CascGlory	Larissa	no dice
2005	CascGlory	Morellentsing	no dice
1999	Charlene	Larissa	2/ 30
2001	Charlene	White Arc	?/ 8?
2001	Charlene	Mahogany Bells	?/ 10?
2000	Charlene	Larissa	?/ 15?
2004	Charlene	sdl Slate3	no dice!
1997	Charlene	Mahogany Bells	?/ 4?

2004	Chernova	Morellentsing	3/ 90
2001	Chernova	L.m.album suprbm	?/ 60
2004	Chernova	sdl ERM 03	3/ 60
2004	Chernova	Whitewood '01	3/ 25
2004	Chernova	OP	6/150
2004	Chernova	sdl N95-03a	3/ 10 iffy
2005	Chernova	sdl F Mrn 02	4/125
2002	Cherry Marble	OP	3/ 60
2005	Cl Shr	sdl (SISel x PW)	4/ 70
1998	Claude Shride	Ozelot	3/ 6
2000	Claude Shride	Ozelot	?/ 90?
2000	Claude Shride	Sprengelinchen	?/ 10?
1998	Claude Shride	Puenktchen	3/ 10?
1998	Claude Shride	Slate's Select	3/ 0
1998	Claude Shride	Sprengelinchen	3/ 4?
2000	Claude Shride	Sutton Court	?/ 50
1999	Claude Shride	Terrace City	?/ 6
1999	Claude Shride	White Arc	2/ 15
1998	Claude Shride	Moonyeen '97	3/ 14
2001	Claude Shride	L.m.album suprbm	?/ 40?
2000	Claude Shride	White Arc	?/ 40?
2000	Claude Shride	L.m.album suprbm	?/ 25
2000	Claude Shride	Amelita	?/140
1998	Claude Shride	Bornholm	3/ 3?
1997	Claude Shride	L.m.album	?/ 4?
2003	Claude Shride	sdl NM134846	3/ 80
1997	Claude Shride	Moonyeen	?/ 2?
2003	Claude Shride	sdl 'Burst'	3/ 70
1997	Claude Shride	L.hansonii	6/170
1997	Claude Shride	EarlyBird	?/ 60
2003	Claude Shride	sdl N96-07a	3/100
2000	Claude Shride	L.m.albifl.	?/ 60
1998	Claude Shride	L.m.album	?/ 1
2000	Claude Shride	Larissa	?/ 60
1998	Claude Shride	Larissa '97	3/ 23
2000	Claude Shride	Mahogany Bells '99	?/ 50
2000	Claude Shride	L.hansonii	11/400+
2005	Claude Shride (2)	Random Bliss	10/ 80
2005	Claude Shride (4)	Ozelot '01	25/ 80
2004	Cranberry Dancer	Maroon King '01	no dice!
1997	Cranberry Dancer	OP	?/ 50
2004	Cranberry Dancer	Whitewood '01	3/ 0
2005	Devon Dots	sdl (SISelxPW) red1	4/200
2000	Early Bird	OP	?/ 40
1997	Early Bird	L.m.album	?/ 2
1998	G.F.Wilson	OP	4/ 37
1998	G.F.Wilson	Bornholm	2/ 5
1998	G.F.Wilson	Sing Out	2/ 8?
1997	Glacier	OP	?/180

1999	Glacier	Lusher	2/100
2000	Helsinki	Port Wine	?/ 35?
2000	Helsinki	Mahogany Bells '99	?/ 0
2004	Hilde Haber	sdl Slate3	no dice!
1999	Irish Cream	L.m.albifl.	2/ 20?
2001	Irish Cream	Larissa	?/ 70
2000	Irish Cream	L.m.albifl. '99	?/ 0
1999	Irish Cream	Slate's Select	2/ 0
2001	Irish Cream	White Arc	?/ 25
2000	Irish Cream	L.m.album	?/ 25?
1999	Irish Cream	L.m.album	2/ 28
1999	JS Dijt	Larissa	?/ 0
2000	JS Dijt	Sprengelinchen	?/ 0
1999	JS Dijt	L.m.albifl.	3/ 10?
2000	JS Dijt	L.m.albifl.	?/ 0
2000	JS Dijt	White Arc	?/ 0
2001	Juanita	Amelita	?/ 0
1998	Juanita	Ozelot	1/ 25
1999	Juanita	Larissa '98	2/ 60
1999	Juanita	L.m.album	2/100
1999	Juanita	Irish Cream	2/ 60
1999	Juanita	Amelita '98	?/ 15
2004	Komet F	sdl NM134846	3/ 0
2005	Komet F	OP	1/ 5?
2004	Komet G	sdl ERM 03	3/ 0
2004	L. martagon (patio)	Maroon King '01	3/120
2003	L. martagon (patio)	OP	4/130
2004	L. martagon (tree)	Whitewood '01	3/ 20
2004	L. martagon (tree)	Chernova	2/100
1999	L.hansonii	Larissa	2/110
1998	L.hansonii	Arabian Knight	2/ 0
1998	L.hansonii	Akimina	3/ 5?
2000	L.hansonii	Larissa	?/ 70
1998	L.m.albifl.pnk	L.m.album	3/170
1999	L.m.albifl.pnk	White Arc	2/150
2000	L.m.albifl.pnk	Slate's Select '99	?/ 0
1999	L.m.albifl.pnk	Slate's Select	?/ 90
2000	L.m.albifl.pnk	Sarcee '99	?/200
2001	L.m.albifl.pnk	Maroon King	?/150
2003	L.m.albifl.pnk	OP	5/200
1998	L.m.album	Sarcee '97	3/ 75
1999	L.m.album	Ozelot '98	?/ 50
2001	L.m.album	Ozelot '00	?/ 80
1999	L.m.album	Larissa '98	3/ 0
1998	L.m.album	Slate's Select	3/ 6
2000	L.m.album	Larissa '99	?/ 0
1999	L.m.album	Slate's Select '98	?/ 0
2000	L.m.album	SuttonCourt	?/ 30
2001	L.m.album	White Arc '00	?/125

1997	L.m.album	Moonyeen	?/ 50
2000	L.m.album	Mahogany Bells '99	?/ 0
1999	L.m.album	Mahogany Bells '98	2/140
1998	L.m.album	Mahogany Bells '97	3/ 0
2000	L.m.album	Moonyeen '99	?/ 50
2002	L.m.album	Mahogany Bells	3/100+
1997	L.m.album	Mahogany Bells	?/ 40
2005	L.m.album	Chernova	no dice!
1998	L.m.album	Amelita '97	5/230
1998	L.m.album	Claude Shride '97	?/ 0
1998	L.m.album	Larissa '97	2/17?
1999	L.m.album	L.m.albifl.	5/250
1999	L.m.album	Juanita	2/120
2001	L.m.album superbum	Port Wine	?/ 60
2001	L.m.album superbum	Amelita	?/140
1999	L.m.var.daugava	Arabian Knight	2/110
1999	L.m.var.daugava	IrishCream	2/185
1999	L.m.var.daugava	Port Wine	2/250
1999	L.m.var.daugava	Slate's Select	2/110
2001	L.m.var.daugava	White Arc	?/ 20
2004	L.m.var.daugava	sdl ERM 03	2/ 60
1999	L.martagon	Larissa '98	3/250?
2000	L.martagon	L.m.albifl.	?/240
1999	L.martagon	Juanita	2/150
2000	L.martagon	Larissa '99	?/ 30?
1999	L.martagon	Mahogany Bells	3/ 0
2000	L.martagon	L.m.albifl. '99	?/ 80
2000	L.martagon	Port Wine '99	?/150
1999	L.martagon	Arabian Knight	?/125
2000	L.martagon	Ozelot	?/150
2000	Larissa	SuttonCourt	?/ 0
1998	Larissa	Autumn Color	2/ 0
1998	Larissa	Puenktchen	2/ 0
1999	Larissa	Slate's Select	2/ 0
2001	Larissa	sdl Slate3	?/ 0
1999	Larissa	White Arc	2/ 0
2004	Larissa	Morellentsing	3/ 10
2004	Larissa	sdl CrmGrn	no dice!
2004	Larissa	Port Wine	no dice!
2004	Larissa	Sarcee (drkr 1)	no dice!
2000	Larissa	Slate's Select	?/ 0
1999	Mahogany Bells	Port Wine	2/ 5?
2000	Mahogany Bells	Puenktchen	?/ 8?
1998	Mahogany Bells	Puenktchen	2/ 6?
2001	Mahogany Bells	sdl 10-107	?/ 15?
2001	Mahogany Bells	sdl HH ylw	?/ 14
1998	Mahogany Bells	Sing Out	2/ 2
1997	Mahogany Bells	L.martagon	?/ 0
1999	Mahogany Bells	White Arc	3/ 20?

1999	Mahogany Bells	Pink Taurade	2/ 35
2000	Mahogany Bells	Pink Taurade	?/ 50
2001	Mahogany Bells	White Arc	?/ 10
2000	Mahogany Bells	White Arc	?/ 6?
2000	Mahogany Bells	Sprengelinchen	?/ 4?
2001	Mahogany Bells	L.m.album suprbm	?/ 0
2001	Mahogany Bells	Chernova	?/ 1?
1997	Mahogany Bells	Claude Shride	?/ 2?
1997	Mahogany Bells	Port Wine	?/ 0
1998	Mahogany Bells	Claude Shride	2/ 0
2000	Mahogany Bells	L.hansonii	?/ 10?
2000	Mahogany Bells	Amelita	?/ 4?
2001	Mahogany Bells	Charlene	?/ 20?
1999	Mahogany Bells	L.m.albifl.	2/ 0
2001	Mahogany Bells	Arabian Knight	?/ 5
1997	Mahogany Bells	L.m.daugava	?/ 0
1999	Mahogany Bells	L.m.daugava	2/ 0
2000	Mahogany Bells	Larissa	?/ 0
1998	Mahogany Bells	Moonyeen	?/ 5?
1997	Mahogany Bells	OP	?/ 50
1997	Mahogany Bells	L.hansonii	?/ 50
1999	Mahogany Bells	Ozelot	2/ 5?
1998	Mahogany Bells	Akimina	2/ 12
1999	Margaret Mauve	Port Wine	2/ 48
2000	Margaret Mauve	OP	?/ 30
1997	Margaret Mauve	OP	?/ 20
2005	Marhanex	OP	8/110?
2001	Maroon King	White Arc	?/100
2002	Maroon King	White Arc	3/ 35
2000	Moonyeen	Chernova	?/ 0
1999	Moonyeen	Pink Taurade	2/ 0
2000	Moonyeen	Sprengelinchen	?/ 8?
1998	Moonyeen	L.m.album	2/ 10?
1999	Moonyeen	Ozelot	3/ 0
1998	Moonyeen	Amelita	3/ 10?
2000	Moonyeen	OP	?/ 10
2000	Moonyeen	L.m.albifl.	?/ 8?
1997	Moonyeen	L.m.album	?/ 10?
1999	Moonyeen	L.m.albifl.	?/ 0
2000	Moonyeen	Arabian Knight	?/ 10?
1997	Moonyeen	Amelita	?/ 10?
2004	Morellentsing	sdl N95-03a	3/ 10 iffy
2004	Morellentsing	sdl ERM 03	3/ 10 iffy
2005	Morellentsing	sdl (OzxPW)	4/ 30?
2001	Morning Melody	L.m.albifl.	?/ 80
1997	Mrs R O Backhouse	OP	many/500
2000	Mrs R O Backhouse	sdl Tarlton album	?/ 85
1997	Mrs R O Backhouse	Sarcee	?/ 60
1998	Mrs R O Backhouse	Sarcee	2/124

2000	Mrs R O Backhouse	OP	?/ 90
2000	Mrs R O Backhouse	Sprenkelinchen	?/ 55
1999	Mrs R O Backhouse	Slate's Select	3/ 0
1998	Mrs R O Backhouse	L.m album	2/ 18?
1997	Mrs R O Backhouse	L.m album	?/ 0
1998	Mrs R O Backhouse	Slate's Select	3/ 15?
1998	Orange Marmalade	Mahogany Bells '97	3/ 0
1998	Orange Marmalade	L.m.album	3/ 6?
1998	Orange Marmalade	Bornholm	2/ 6?
1997	Orange Marmalade	OP	?/ 14
2004	Orchid Gem	sdl NM134846	3/ 30
2000	Ozelot	Port Wine	?/150
1999	Ozelot	Port Wine	2/ 35
1997	Ozelot	OP	?/ 75
1998	Ozelot	Amelita '97	?/140
2000	Paisley Hybrids	OP	?/ 50
1999	Pink Attraction	Pink Taurade	3/ 0
1999	Pink Attraction	Zlatice	?/ 0
1999	Pink Attraction	Slate's Select	2/ 8?
1999	Pink Attraction	White Arc	?/ 0
1998	Pink Coral Belle	OP	?/180
2004	Pink Taurade	sdl ERM 49	3/ 14 very iffy
2004	Pink Taurade	Port Wine	3/ 3 very iffy
2004	Pink Taurade	Sarcee	try in 2005
1998	Pink Taurade	Ozelot	2/ 0
2000	Pink Taurade	L.m.albifl.	?/ 0
2000	Pink Taurade	Sarcee	?/ 0
1999	Pink Taurade	Sarcee	3/ 0
2000	Pink Taurade	Rose Tattoo	?/ 0
1998	Pink Taurade	Sprenkelinchen	2/ 0
2000	Pink Taurade	Sprenkelinchen	?/ 0
1999	Pink Taurade	White Arc	3/ 0
1999	Port Wine	Zlatice	2/ 30
2001	Port Wine	White Arc '00	?/100
1999	Port Wine	Slate's Select	3/120
2004	Port Wine	OP	3/110
1999	Port Wine	Arabian Knight	2/ 80
2004	Port Wine	sdl Slate3	2/ 60
2005	Port Wine	sdl N97-01	4/250+
2000	Port Wine	Amelita '99	?/100
2005	Port Wine	Mor.Tsing	4/200
2001	Port Wine	L.m.album suprbm	?/150
2004	Port Wine	Chernova	3/160
2005	Port Wine	Mar.King 2001	2/ 30
2005	Port Wine	Ozelot 2001	4/ 43?
2005	Port Wine	Schokostern	3/150
2004	Port Wine	sdl ERM 35	3/ 75
2000	Port Wine	L.m.albifl.	?/120
1997	Port Wine	Amelita	?/ 70

2004	Port Wine	sdl ERM 03	2/110
2001	Port Wine	sdl N96-07a	?/100
2005	Port Wine	Ozelot 2001	3/ 26?
2000	Puenktchen	Rose Tattoo	?/ 60
1998	Puenktchen	Larissa	2/ 76
1998	Puenktchen	Juanita	2/ 41
2000	Puenktchen	Cherry Marble	?/ 60
1997	Puenktchen	Amelita	?/ 65
2005	Random Bliss	sdl N96-08a	3/ 14
1997	Red Path	OP	?/ 30
2004	Redman	OP	10/300
2000	Romeo	OP	?/ 60
2000	Rosa Falter	Port wine	?/ 45
2000	Rose Arch	OP	?/ 35
2003	Rose Tattoo	OP	?/140
2001	Sarcee	Whitewood	?/110
2001	Sarcee	Mahogany Bells '99	?/125
2001	Sarcee	sdl Slate3	?/100
1999	Sarcee	Port wine	?/140
1997	Sarcee	Towering Delight	?/ 30
1999	Sarcee	White Arc	3/160
1998	Sarcee	Ozelot	1/ 28
2001	Sarcee	sdl N96-07a	?/100
1998	Sarcee	Puenktchen	2/ 86
2004	Sarcee	Charlene	2/135
2004	Sarcee	sdl NM134846	4/200
2004	Sarcee	sdl PnkRnb	3/150
2004	Sarcee	Pink Taurade	4/200
2004	Sarcee	White Arc	4/120
2004	Sarcee	Komet G	4/150
2004	Sarcee	sdl HH Ylw1	3/120
2004	Sarcee	sdl Slate3	no dice!
2004	Sarcee	sdl N97-02	3/200
2002	Sarcee	sdl NM134846	3/ 70
2005	Sarcee	Ozelot '01	3/ 45
2005	Sarcee	sdl N96-08a	3/ 30
1999	Sarcee	Pink Taurade	2/140
1997	Sarcee	OP	many/400
2005	Sarcee	sdl RaspbShk	3/ 50
2005	Sarcee	City Lights	3/ 60
2005	Sarcee	sdl (OzltxPW)	4/150
2005	Sarcee	Random Bliss	3/100
2005	Sarcee	sdl (SISelxPW)2	3/160
2000	Sarcee	L.m.albifl	?/200
2000	Sarcee	Ozelot	?/200
1999	Sarcee	Moonyeen	?/175
2005	Sarcee	Casc.Glory	4/200
1999	Sarcee	L.m.albifl	2/ 35
2000	Sarcee	Chernova	?/180

2000	Sarcee	Amelita	?/200
2005	Sarcee	Larissa	3/ 90
2005	Sarcee (2)	Ozelot '01	3/ 23
2005	Sarcee (2)	Random Bliss	4/125
2005	Sarcee (2)	sdl (SISelxPW) pnk2	4/200
2005	sdl (OzxPW)	Morellentsing	3/100
2005	sdl (SISelxPW) pnk	OP	4/100
2005	sdl (SISelxPW) red1	Morellentsing	4/360
2005	sdl CrmGrn	sdl N97-02	4/150
2005	sdl CrmYlw	sdl N97-02	3/120
2005	sdl Curly Girl	Chernova	no dice!
2005	sdl Elise	OP	3/ 50
2004	sdl ERM 03	Morellentsing	3/ 90
2004	sdl ERM 12	sdl Raspb.Shk.	3/ 85
2004	sdl ERM 35	Maroon King '01	3/ 30
2004	sdl ERM 35	Whitewood '01	2/ 4 ?
2004	sdl ERM 35	Burnt Orange	4/160
2004	sdl ERM 35	Chernova	3/100
2004	sdl ERM 44	sdl PnkRnb	3 / 0
2004	sdl ERM 49	Chernova	3/ 70
2004	sdl ERM 49	Morellentsing	3/ 50
2004	sdl ERM 49	sdl ERM 03	2/ 40
2003	sdl FO slct mxd	OP	?/150
2004	sdl HH Ylw1	sdl NM134846	no dice!
2004	sdl HH Ylw1	sdl NM134849	no dice!
2004	sdl HH Ylw1	sdl N97-02	no dice!
2005	sdl Mar/wh edge	sdl (SISelxPW) pnk2	3/90
2004	sdl N95-03a	Morellentsing	3/150
2005	sdl N95-03a	sdl (OzxPW)	4/300
2004	sdl N96-07a	sdl Slate3	4/125
2005	sdl N96-08a	sdl (OzxPW)	3/ 50?
2005	sdl N97-1	Ozelot '01	4/ 50
2005	sdl N97-1	Chernova	3/225
2004	sdl N97-1	sdl ERM 03	4/200
2004	sdl N97402	City Lights	3/150
2002	sdl N97402	sdl CrmGrn	1/ 9
2005	sdl N97402	CascGlory	4/270
2004	sdl N97H96-07a	sdl Slate3	3/150
2004	sdl N-LtYlw1	sdl HH Ylw1	3/ 65
2004	sdl NM-123846	sdl Slate3	3/ 30
2004	sdl NM-123846	sdl Slate3	3/ 30
2004	sdl NM-123846	Tsingense	3/ 10 iffy
2003	sdl NM134846	sdl 'Burst'	3/ 50
2003	sdl NM134846	sdl N96-07a	3/ 90
2004	sdl NM134849	City Lights	3/ 60
2004	sdl NM134849	sdl ERM 03	2/ 20
2002	sdl NM4734	OP	2/ 40
2005	sdl Pnk Rnb	OP	2/ 45

2004	sdl PnkRnb	Morellentsing	3/ 50
2005	sdl RaspbShk	Morellentsing	4/170
2004	sdl Slate1	Morellentsing	3/ 30
2004	sdl Slate1	sdl N97-02	3/ 30
2004	sdl Slate3	Morellentsing	3/ 15
2004	sdl Slate3	sdl N97-02	3/ 25 ?
2004	sdl Slate3	sdl HH Ylw1	3/ 35
2004	sdl Slate3	sdl NM134846	3/ 25
1998	Sing Out	Sprenkelinchen	?/ 0
1997	Slate's Select	Mahogany Bells	?/ 50
1999	Slate's Select	L.hansonii	2/ 60?
1999	Slate's Select	L.m.albifl	2/140
1998	Slate's Select	L.m.album	2/ 10?
1998	Slate's Select	Larissa	2/ 37
1999	Slate's Select	Larissa	2/ 80
2000	Slate's Select	Larissa '99	?/130
1999	Slate's Select	Sarcee	2/160
2002	Slate's Select	Mahogany Bells '01	3/100+
1999	Slate's Select	Port Wine	2/100
2000	Slate's Select	Sprenkelinchen	?/ 70
2000	Slate's Select	Tsingense	?/35
1999	Slate's Select	White Arc	2/ 30
2000	Sparkler	sdl HH ylw	?/200
1998	Sparkler	Mahogany Bells	2/ 43
1998	Sparkler	Sing Out	?/ 0
2000	Sparkler	White Arc	?/ 50
1999	Sparkler	White Arc	2/ 35
2000	Sparkler	L.m.albifl.	?/ 0
1998	Sparkler	Akimina	2/ 12?
1997	Sparkler	OP	many/200
1997	Sparkler	Mahogany Bells	2/ 65
2005	Spr.Inchen	OP	07/330
1998	Sprenkelinchen	Amelita '97	2/ 67
2000	Sprenkelinchen	White Arc	?/100
2000	Sprenkelinchen	Chernova	?/200
1998	Sutton Court	Sing Out	3/ 9?
1999	Sutton Court	Arabian Knight	3/150
2000	Sutton Court	White Arc	?/ 0
1998	Sutton Court	Puenktchen	2/ 10?
1999	Sutton Court	Port Wine	2/ 0
2000	Sutton Court	OP	?/200
1999	Sutton Court	White Arc	2/ 20?
2000	Sutton Court	Tsingense	?/ 35?
1998	Sutton Court	Larissa	3/ 51
2004	Sutton Court	Mahogany Bells	3/ 50
2000	Sutton Court	L.m.albifl	?/ 20?
2004	Sutton Court	Burnt Orange	3/110
2004	Sutton Court	Arabian Knight	4/160
2004	Sutton Court	Morellentsing	3/ 50

2000	Sutton Court	Larissa	?/ 0
2002	Sweet Betsy	OP	?/300+
1999	Sweet Betsy	Arabian Knight	2/130
2000	Sweet Betsy	Port Wine	?/200
2000	Sweet Betsy	Mahogany Bells '99	?/100
1997	Sweet Betsy	OP	?/100
1999	Terrace City	Claude Shride	?/ 16
1998	Terrace City	L.m.album	2/ 2
1997	Terrace City	L.m.album	?/ 3?
1997	Terrace City	Claude Shride	?/100
1998	Terrace City	Sing Out	2/ 5
2000	Terrace City	L.m.albifl	?/ 0
2000	Terrace City	OP	?/ 70
2000	Terrace City	Mahogany Bells '99	?/ 45
1997	Terrace City	Mahogany Bells	?/ 40
2000	Terrace City	Larissa '99	?/100
2000	Terrace City	Sutton Court	?/ 50
1999	Terrace City	Larissa	2/ 40
1998	Terrace City	Larissa	2/ 0
1997	Theodor Haber	Amelita	?/ 0
1997	Theodor Haber	Sparkler	?/ 0
1997	Theodor Haber	L.hansonii	?/ 0
1999	Theodor Haber	White Arc	2/ 0
1997	Theodor Haber	L.m.album	?/ 0
1998	Theodor Haber	Larissa	2/ 0
1997	Theodor Haber	Moonyeen	?/ 0
1999	Theodor Haber	Bornholm	2/ 0
1997	Towering Delight	OP	?/100
1998	Towering Delight	Sarcee	2/ 26
1997	Towering Delight	Sarcee	?/ 15
2000	Towering Delight	Port Wine	?/ 18
1998	Towering Delight	Mahogany Bells	?/ 20?
1997	Towering Delight	Mahogany Bells	?/ 20?
2000	Towering Delight	Mahogany Bells	?/ 25?
2001	Towering Delight	L.m.albifl.	?/ 0
1997	Towering Delight	L.martagon	?/ 4?
1997	Towering Delight	Amelita	?/ 50
1999	Towering Delight	Port Wine	?/ 15
1999	Tsing	L.m.album	2/ 0
1997	Tsing	OP	?/ 50
1999	Tsing	Bornholm	?/ 0
1999	Tsing	Port Wine	3/ 0
2002	Tsingense	OP	?/ 35?
2000	Tsingense	White Arc	?/ 9?
2000	Tsingense	Sutton Court	?/ 20?
1999	Tsingense	Pink Taurade	2/ 12
1999	Tsingense	Mahogany Bells	2/ 30
2000	Tsingense	Mahogany Bells	?/ 50
2000	Tsingense	Jersey	?/ 20?

1999	Tsingense	White Arc	3/ 20
2004	U mart white	Maroon King '01	3/100
1998	Warm Traces	Zitronenglockchen	2/ 40
2001	White Arc	Mahogany Bells	?/ 70
1999	White Arc	Amelita	2/ 50
2000	White Arc	Amelita	?/ 70?
2000	White Arc	L.m.albifl	?/ 80?
2001	White Arc	sdl Fox pnk	?/ 50
2001	White Arc	Chernova	?/ 50
1999	White Arc	Pink Taurade	2/ 0
2004	White Arc	sdl Slate3	3/ 20
2004	White Arc	sdl N97-02	3/ 50
2004	White Arc	Morellentsing	3/ 40
2004	White Arc	sdl N96-07a	3/ 50
2005	White Arc	sdl(OzxPW)	3/ 35?
2005	White Arc	sdl N96-08a	no dice!
2005	White Arc	CascGlory	3/ 35?
2004	White Arc	sdl ERM 03	3/ 50
2002	White Arc	sdl N97-02	?/ 12
2001	Whitewood	sdl N96-07a	?/ 20
2000	Windsong Hybrids	L.m.albifl	?/ 0
1999	Windsong Hybrids	Larissa	2/ 7?
1998	Windsong Hybrids	OP	?/ 14?
2000	Windsong Hybrids	Port Wine	?/ 0
1999	Windsong Hybrids	White Arc	2/ 10?
1999	Zitronenglockchen	Arabian Knight	2/ 56
1998	Zitronenglockchen	Bornholm	2/ 10
2000	Zlatice	OP	?/ 25
1999	Zlatice	Slate's Select	3/ 20
1999	Zlatice	L.m.daugava	2/ 30

**Table 2: Seeds produced
(sorted by pollen-parent)**

Year	Seedparent	Pollenparent	Pods/Seeds
1998	Sparkler	Akimina	2/ 12?
1998	L.hansonii	Akimina	3/ 5?
1998	Mahogany Bells	Akimina	2/ 12
1997	Moonyeen	Amelita	?/ 10?
1999	White Arc	Amelita	2/ 50
1997	Towering Delight	Amelita	?/ 50
1997	Theodor Haber	Amelita	?/ 0
2000	Sarcee	Amelita	?/200
1997	Puenktchen	Amelita	?/ 65
1997	Port Wine	Amelita	?/ 70
2000	White Arc	Amelita	?/ 70?

1998	Moonyeen	Amelita	3/ 10?
2000	Mahogany Bells	Amelita	?/ 4?
2001	Juanita	Amelita	?/ 0
1997	Brocade	Amelita	?/ 75
1998	Brocade	Amelita	?/100
2001	L.m.album superbum	Amelita	?/140
2000	Claude Shride	Amelita	?/140
1998	L.m.album	Amelita '97	5/230
1998	Ozelot	Amelita '97	?/140
1998	Sprenkelinchen	Amelita '97	2/ 67
1999	Juanita	Amelita '98	?/ 15
2000	Port Wine	Amelita '99	?/100
1999	L.martagon	Arabian Knight	?/125
2000	Moonyeen	Arabian Knight	?/ 10?
1998	L.hansonii	Arabian Knight	2/ 0
1999	Sutton Court	Arabian Knight	3/150
1999	Sweet Betsy	Arabian Knight	2/130
1999	L.m.var.daugava	Arabian Knight	2/110
2001	Mahogany Bells	Arabian Knight	?/ 5
2004	Sutton Court	Arabian Knight	4/160
1999	Port Wine	Arabian Knight	2/ 80
1999	Zitronenglockchen	Arabian Knight	2/ 56
1998	Larissa	Autumn Color	2/ 0
1999	Theodor Haber	Bornholm	2/ 0
1998	Claude Shride	Bornholm	3/ 3?
1998	Zitronenglockchen	Bornholm	2/ 10
1998	Orange Marmalade	Bornholm	2/ 6?
1999	Tsing	Bornholm	?/ 0
1998	G.F.Wilson	Bornholm	2/ 5
2004	Sutton Court	Burnt Orange	3/110
2004	sdl ERM 35	Burnt Orange	4/160
2005	Sarcee	Casc.Glory	4/200
2005	sdl N97402	CascGlory	4/270
2005	White Arc	CascGlory	3/ 35?
2001	Arabian Knight	Charlene	?/ 50
2001	Mahogany Bells	Charlene	?/ 20?
2004	Sarcee	Charlene	2/135
2004	sdl ERM 35	Chernova	3/100
2004	L. martagon (tree)	Chernova	2/100
2004	Port Wine	Chernova	3/160
2005	sdl Curly Girl	Chernova	no dice!
2000	Moonyeen	Chernova	?/ 0
2005	L.m.album	Chernova	no dice!
2001	Mahogany Bells	Chernova	?/ 1?
2004	sdl ERM 49	Chernova	3/ 70
2000	Sarcee	Chernova	?/180
2001	White Arc	Chernova	?/ 50
2000	Sprenkelinchen	Chernova	?/200
2005	sdl N97-1	Chernova	3/225

2000	Arabian Knight	Cherry Marble	?/ 80
2000	Puenktchen	Cherry Marble	?/ 60
2004	sdl NM134849	City Lights	3/ 60
2004	sdl N97402	City Lights	3/150
2005	Sarcee	City Lights	3/ 60
1998	Mahogany Bells	Claude Shrude	2/ 0
1997	Terrace City	Claude Shrude	?/100
1999	Terrace City	Claude Shrude	?/ 16
1997	Mahogany Bells	Claude Shrude	?/ 2?
1998	L.m.album	Claude Shrude '97	?/ 0
1997	Claude Shrude	EarlyBird	?/ 60
1997	Amelita	Glacier	?/ 50
1999	Juanita	Irish Cream	2/ 60
1999	L.m.var.daugava	IrishCream	2/185
2000	Tsingense	Jersey	?/ 20?
2000	Autumn Color	JS Dijt	?/ 80
1998	Puenktchen	Juanita	2/ 41
1999	L.m.album	Juanita	2/120
1999	L.martagon	Juanita	2/150
2004	Sarcee	Komet G	4/150
1999	Slate's Select	L.hansonii	2/ 60?
2000	Claude Shrude	L.hansonii	11/400+
1997	Theodor Haber	L.hansonii	?/ 0
2000	Mahogany Bells	L.hansonii	?/ 10?
1997	Claude Shrude	L.hansonii	6/170
1997	Mahogany Bells	L.hansonii	?/ 50
2001	Arabian Knight	L.hansonii	?/ 75
1997	Mrs R O Backhouse	L.m album	?/ 0
1998	Mrs R O Backhouse	L.m album	2/ 18?
2000	Windsong Hybrids	L.m.albifl	?/ 0
2000	Terrace City	L.m.albifl	?/ 0
1999	Sarcee	L.m.albifl	2/ 35
2000	Sarcee	L.m.albifl	?/200
2000	Sutton Court	L.m.albifl	?/ 20?
1999	Slate's Select	L.m.albifl	2/140
2000	White Arc	L.m.albifl	?/ 80?
2000	Amelita	L.m.albifl.	5?100?
2001	Morning Melody	L.m.albifl.	?/ 80
1999	Moonyeen	L.m.albifl.	?/ 0
2000	Moonyeen	L.m.albifl.	?/ 8?
1999	Irish Cream	L.m.albifl.	2/ 20?
2000	Claude Shrude	L.m.albifl.	?/ 60
1999	Mahogany Bells	L.m.albifl.	2/ 0
2000	Akimina	L.m.albifl.	?/ 5?
2001	Towering Delight	L.m.albifl.	?/ 0
2000	Port Wine	L.m.albifl.	?/120
2000	Pink Taurade	L.m.albifl.	?/ 0
2000	JS Dijt	L.m.albifl.	?/ 0
1999	L.m.album	L.m.albifl.	5/250

1999	JS Dijt	L.m.albifl.	3/ 10?
2000	Brocade	L.m.albifl.	?/ 13
2000	L.martagon	L.m.albifl.	?/240
2000	Sparkler	L.m.albifl.	?/ 0
2000	L.martagon	L.m.albifl. '99	?/ 80
2000	Irish Cream	L.m.albifl. '99	?/ 0
1998	Moonyeen	L.m.album	2/ 10?
1997	Moonyeen	L.m.album	?/ 10?
1998	L.m.albifl.pnk	L.m.album	3/170
1997	Terrace City	L.m.album	?/ 3?
1998	Orange Marmalade	L.m.album	3/ 6?
1999	Juanita	L.m.album	2/100
1999	Irish Cream	L.m.album	2/ 28
1997	Early Bird	L.m.album	?/ 2
1998	Claude Shride	L.m.album	?/ 1
1997	Claude Shride	L.m.album	?/ 4?
1997	Bendick	L.m.album	?/ 2?
2000	Amelita	L.m.album	2/ 50
2000	Irish Cream	L.m.album	?/ 25?
1997	Theodor Haber	L.m.album	?/ 0
1998	Slate's Select	L.m.album	2/ 10?
1999	Tsing	L.m.album	2/ 0
1998	Terrace City	L.m.album	2/ 2
2001	Claude Shride	L.m.album suprbm	?/ 40?
2001	Chernova	L.m.album suprbm	?/ 60
2001	Mahogany Bells	L.m.album suprbm	?/ 0
2001	Port Wine	L.m.album suprbm	?/150
2000	Claude Shride	L.m.album suprbm	?/ 25
1999	Mahogany Bells	L.m.daugava	2/ 0
1997	Mahogany Bells	L.m.daugava	?/ 0
1999	Zlatice	L.m.daugava	2/ 30
1997	Towering Delight	L.martagon	?/ 4?
1997	Mahogany Bells	L.martagon	?/ 0
2000	Mahogany Bells	Larissa	?/ 0
1999	Slate's Select	Larissa	2/ 80
2000	Sutton Court	Larissa	?/ 0
1999	L.hansonii	Larissa	2/110
1998	Sutton Court	Larissa	3/ 51
1999	JS Dijt	Larissa	?/ 0
2000	L.hansonii	Larissa	?/ 70
1998	Slate's Select	Larissa	2/ 37
1999	Terrace City	Larissa	2/ 40
2000	Claude Shride	Larissa	?/ 60
1998	Theodor Haber	Larissa	2/ 0
1998	Puenktchen	Larissa	2/ 76
1998	Terrace City	Larissa	2/ 0
2000	Charlene	Larissa	?/ 15?
2000	Arabian Knight	Larissa	?/ 25
1999	Charlene	Larissa	2/ 30

1999	Arabian Knight	Larissa	2/ 10
1999	Windsong Hybrids	Larissa	2/ 7?
2000	Amelita	Larissa	?/ 30
1998	Arabian Knight	Larissa	3/ 22
1999	Bornholm	Larissa	3/100
2005	CascGlory	Larissa	no dice
2005	Sarcee	Larissa	3/ 90
2001	Irish Cream	Larissa	?/ 70
1998	L.m.album	Larissa '97	2/17?
1998	Claude Shride	Larissa '97	3/ 23
1999	L.m.album	Larissa '98	3/ 0
1999	L.martagon	Larissa '98	3/250?
1999	Juanita	Larissa '98	2/ 60
2000	L.martagon	Larissa '99	?/ 30?
2000	Slate's Select	Larissa '99	?/130
2000	Terrace City	Larissa '99	?/100
2000	L.m.album	Larissa '99	?/ 0
1999	Akimina	Lusher	2/ 15
1999	Glacier	Lusher	2/100
1997	Towering Delight	Mahogany Bells	?/ 20?
1999	L.martagon	Mahogany Bells	3/ 0
2001	White Arc	Mahogany Bells	?/ 70
2004	Sutton Court	Mahogany Bells	3/ 50
1997	Amelita	Mahogany Bells	?/ 65
1999	Tsingense	Mahogany Bells	2/ 30
1998	Towering Delight	Mahogany Bells	?/ 20?
1997	Charlene	Mahogany Bells	?/ 4?
2001	Charlene	Mahogany Bells	?/ 10?
2000	Akimina	Mahogany Bells	?/ 0
2000	Tsingense	Mahogany Bells	?/ 50
1997	Slate's Select	Mahogany Bells	?/ 50
2000	Towering Delight	Mahogany Bells	?/ 25?
2002	L.m.album	Mahogany Bells	3/100+
1997	Terrace City	Mahogany Bells	?/ 40
1997	L.m.album	Mahogany Bells	?/ 40
1997	Sparkler	Mahogany Bells	2/ 65
1998	Sparkler	Mahogany Bells	2/ 43
2001	Amelita	Mahogany Bells	?/ 75
2002	Slate's Select	Mahogany Bells '01	3/100+
1998	Orange Marmalade	Mahogany Bells '97	3/ 0
1998	L.m.album	Mahogany Bells '97	3/ 0
1999	L.m.album	Mahogany Bells '98	2/140
2000	Helsinki	Mahogany Bells '99	?/ 0
2000	Terrace City	Mahogany Bells '99	?/ 45
2000	Claude Shride	Mahogany Bells '99	?/ 50
2001	Sarcee	Mahogany Bells '99	?/125
2000	L.m.album	Mahogany Bells '99	?/ 0
2000	Sweet Betsy	Mahogany Bells '99	?/100
2005	Port Wine	Mar.King 2001	2/ 30

2001	L.m.albifl.pnk	Maroon King	?/150
2004	L. martagon (patio)	Maroon King '01	3/120
2004	sdl ERM 35	Maroon King '01	3/ 30
2004	Cranberry Dancer	Maroon King '01	no dice!
2004	U mart white	Maroon King '01	3/100
2005	Amelita	Maroon King '01	no dice!
1997	Theodor Haber	Moonyeen	?/ 0
1999	Sarcee	Moonyeen	?/175
1998	Mahogany Bells	Moonyeen	?/ 5?
1997	L.m.album	Moonyeen	?/ 50
1997	Claude Shrider	Moonyeen	?/ 2?
1998	Claude Shrider	Moonyeen '97	3/ 14
2000	L.m.album	Moonyeen '99	?/ 50
2005	Port Wine	Mor.Tsing	4/200
2004	sdl PnkRnb	Morellentsing	3/ 50
2004	sdl N95-03a	Morellentsing	3/150
2005	Black Prince	Morellentsing	3/ 90
2005	sdl (SISelxPW) red1	Morellentsing	4/360
2004	Larissa	Morellentsing	3/ 10
2004	Burnt Orange	Morellentsing	3/100
2004	sdl ERM 49	Morellentsing	3/ 50
2004	sdl ERM 03	Morellentsing	3/ 90
2004	Sutton Court	Morellentsing	3/ 50
2004	sdl Slate1	Morellentsing	3/ 30
2005	sdl (OzxPW)	Morellentsing	3/100
2005	sdl RaspbShk	Morellentsing	4/170
2004	Chernova	Morellentsing	3/ 90
2005	CascGlory	Morellentsing	no dice
2004	White Arc	Morellentsing	3/ 40
2004	Amelita	Morellentsing	6/110
2004	sdl Slate3	Morellentsing	3/ 15
1999	Arabian Knight	Mrs RO Backhouse	3/ 35
2004	Carolyn Rollison	OP	12/999
2000	Romeo	OP	?/ 60
2000	Carolyn Rollison	OP	?/350
2000	Rose Arch	OP	?/ 35
2002	sdl NM4734	OP	2/ 40
2003	L. martagon (patio)	OP	4/130
1997	Red Path	OP	?/ 30
2004	Chernova	OP	6/150
1997	Sarcee	OP	many/400
2000	Sutton Court	OP	?/200
2004	Burnt Orange	OP	6/150
2004	Redman	OP	10/300
1998	Pink Coral Belle	OP	?/180
2002	Sweet Betsy	OP	?/300+
2005	sdl Elise	OP	3/ 50
1997	Sweet Betsy	OP	?/100
2003	L.m.albifl.pnk	OP	5/200

2005	Spr.Inchen	OP	07/330
2005	sdl (SISelxPW) pnk	OP	4/100
2005	Komet F	OP	1/ 5?
1998	Windsong Hybrids	OP	?/ 14?
1997	Glacier	OP	?/180
2005	sdl Pnk Rnb	OP	2/ 45
2003	Rose Tattoo	OP	?/140
1998	G.F.Wilson	OP	4/ 37
2000	Early Bird	OP	?/ 40
1997	Cranberry Dancer	OP	?/ 50
1997	Towering Delight	OP	?/100
2003	sdl FO slct mxd	OP	?/150
2000	Terrace City	OP	?/ 70
2005	Marhanex	OP	8/110?
1997	Ozelot	OP	?/ 75
1997	Sparkler	OP	many/200
1997	Orange Marmalade	OP	?/ 14
1997	Tsing	OP	?/ 50
2000	Moonyeen	OP	?/ 10
2000	Mrs R O Backhouse	OP	?/ 90
1997	Mrs R O Backhouse	OP	many/500
2004	Port Wine	OP	3/110
1997	Mahogany Bells	OP	?/ 50
2000	Zlatice	OP	?/ 25
2000	Paisley Hybrids	OP	?/ 50
2002	Cherry Marble	OP	3/ 60
1997	Margaret Mauve	OP	?/ 20
2000	Margaret Mauve	OP	?/ 30
2002	Tsingense	OP	?/ 35?
1998	Sarcee	Ozelot	1/ 28
1998	Amelita	Ozelot	2/ 0
2001	Amelita	Ozelot	?/ 30
1999	Moonyeen	Ozelot	3/ 0
1999	Brocade	Ozelot	2/ 20
1998	Brocade	Ozelot	2/ 17?
2000	Brocade	Ozelot	? 50
2000	Sarcee	Ozelot	?/200
1998	Pink Taurade	Ozelot	2/ 0
1998	Juanita	Ozelot	1/ 25
2000	Claude Shride	Ozelot	?/ 90?
1998	Bendick	Ozelot	2/ 0
2001	Bendick	Ozelot	?/ 1?
2000	L.martagon	Ozelot	?/150
1999	Mahogany Bells	Ozelot	?/ 5?
1998	Claude Shride	Ozelot	3/ 6
2001	L.m.album	Ozelot '00	?/ 80
2005	Sarcee	Ozelot '01	3/ 45
2005	Claude Shride (4)	Ozelot '01	25/ 80
2005	Amelita	Ozelot '01	5/ 23?

2005	Sarcee (2)	Ozelot '01	3/ 23
2005	sdl N97-1	Ozelot '01	4/ 50
2005	Port Wine	Ozelot 2001	4/ 43?
2005	Port Wine	Ozelot 2001	3/ 26?
1999	L.m.album	Ozelot '98	?/ 50
2000	Mahogany Bells	Pink Taurade	?/ 50
2004	Sarcee	Pink Taurade	4/200
1999	White Arc	Pink Taurade	2/ 0
1999	Mahogany Bells	Pink Taurade	2/ 35
1999	Brocade	Pink Taurade	2/ 0
1999	Pink Attraction	Pink Taurade	3/ 0
1999	Sarcee	Pink Taurade	2/140
1999	Tsingense	Pink Taurade	2/ 12
1999	Moonyeen	Pink Taurade	2/ 0
2000	Ozelot	Port Wine	?/150
2000	Helsinki	Port Wine	?/ 35?
1999	Akimina	Port Wine	2/ 15
1999	Mahogany Bells	Port Wine	2/ 5?
2000	Towering Delight	Port Wine	?/ 18
2000	Sweet Betsy	Port Wine	?/200
1999	Towering Delight	Port Wine	?/ 15
2000	Akimina	Port Wine	?/ 0
1997	Mahogany Bells	Port Wine	?/ 0
2001	L.m.album superbum	Port Wine	?/ 60
2004	Larissa	Port Wine	no dice!
1997	Bendick	Port Wine	?/ 25
1999	Arabian Knight	Port Wine	?/ 8?
1999	Sutton Court	Port Wine	2/ 0
2004	Attiwaw	Port Wine	3/ 50
2000	Brocade	Port Wine	?/ 35
1999	Brocade	Port Wine	2/ 15
1999	Slate's Select	Port Wine	2/100
1999	Ozelot	Port Wine	2/ 35
1999	Margaret Mauve	Port Wine	2/ 48
1999	Amelita	Port Wine	2/140
2000	Rosa Falter	Port wine	?/ 45
2004	Pink Taurade	Port Wine	3/ 3 very iffy
1999	L.m.var.daugava	Port Wine	2/250
2000	Windsong Hybrids	Port Wine	?/ 0
1999	Tsing	Port Wine	3/ 0
2000	Amelita	Port Wine	?/ 0
1999	Sarcee	Port wine	?/140
2000	L.martagon	Port Wine '99	?/150
1998	Attiwaw	Puenktchen	2/ 3?
1998	Akimina	Puenktchen	2/ 0
1998	Larissa	Puenktchen	2/ 0
1998	Sarcee	Puenktchen	2/ 86
1998	Sutton Court	Puenktchen	2/ 10?
1998	Mahogany Bells	Puenktchen	2/ 6?

1998	Brocade	Puenktchen	2/ 4?
2000	Mahogany Bells	Puenktchen	?/ 8?
1998	Claude Shride	Puenktchen	3/ 10?
2005	Claude Shride (2)	Random Bliss	10/ 80
2005	Amelita	Random Bliss	4/ 70
2005	Sarcee	Random Bliss	3/100
2005	Black Prince	Random Bliss	no dice!
2005	Sarcee (2)	Random Bliss	4/125
2000	Pink Taurade	Rose Tattoo	?/ 0
2000	Puenktchen	Rose Tattoo	?/ 60
1998	Towering Delight	Sarcee	2/ 26
1997	Towering Delight	Sarcee	?/ 15
1999	Slate's Select	Sarcee	2/160
2000	Pink Taurade	Sarcee	?/ 0
2004	Pink Taurade	Sarcee	try in 2005
1997	Mrs R O Backhouse	Sarcee	?/ 60
1998	Mrs R O Backhouse	Sarcee	2/124
1999	Pink Taurade	Sarcee	3/ 0
2004	Amelita	Sarcee (drkr 1)	3/ 90
2004	Larissa	Sarcee (drkr 1)	no dice!
1998	L.m.album	Sarcee '97	3/ 75
2000	L.m.albifl.pnk	Sarcee '99	?/200
2005	Port Wine	Schokostern	3/150
2005	Sarcee	sdl (OzltxPW)	4/150
2005	sdl N96-08a	sdl (OzxPW)	3/ 50?
2005	Morellentsing	sdl (OzxPW)	4/ 30?
2005	sdl N95-03a	sdl (OzxPW)	4/300
2005	Amelita	sdl (OzxPW)	2/ 25
2005	Cl Shr	sdl (SISel x PW)	4/ 70
2005	sdl Mar/wh edge	sdl (SISelxPW) pnk2	3/90
2005	Amelita	sdl (SISelxPW) pnk2	4/ 90
2005	Sarcee (2)	sdl (SISelxPW) pnk2	4/200
2005	Devon Dots	sdl (SISelxPW) red1	4/200
2005	Sarcee	sdl (SISelxPW)2	3/160
2001	Mahogany Bells	sdl 10-107	?/ 15?
2003	Claude Shride	sdl 'Burst'	3/ 70
2003	sdl NM134846	sdl 'Burst'	3/ 50
2002	Amelita	sdl CrmGrn	?/ 50
2002	sdl N97402	sdl CrmGrn	1/ 9
2004	Larissa	sdl CrmGrn	no dice!
2004	L.m.var.daugava	sdl ERM 03	2/ 60
2004	sdl NM134849	sdl ERM 03	2/ 20
2004	Chernova	sdl ERM 03	3/ 60
2004	Morellentsing	sdl ERM 03	3/ 10 iffy
2004	Burnt Orange	sdl ERM 03	4/140
2004	Port Wine	sdl ERM 03	2/110
2004	sdl ERM 49	sdl ERM 03	2/ 40
2004	Komet G	sdl ERM 03	3/ 0
2004	White Arc	sdl ERM 03	3/ 50

2004	sdl N97-1	sdl ERM 03	4/200
2004	Port Wine	sdl ERM 35	3/ 75
2004	Pink Taurade	sdl ERM 49	3/ 14 very iffy
2005	Chernova	sdl F Mrn 02	4/125
2001	White Arc	sdl Fox pnk	?/ 50
2001	Mahogany Bells	sdl HH ylw	?/ 14
2000	Sparkler	sdl HH ylw	?/200
2004	sdl Slate3	sdl HH Ylw1	3/ 35
2004	Sarcee	sdl HH Ylw1	3/120
2004	sdl N-LtYlw1	sdl HH Ylw1	3/ 65
2000	Autumn Color	sdl HH1 ylw	?/ 70?
2005	Akimina	sdl Mar/wh edge	5/ 50?
2004	Morellentsing	sdl N95-03a	3/ 10 iffy
2004	Chernova	sdl N95-03a	3/ 10 iffy
2004	Amelita	sdl N95-03a	3/ 40
2004	Amelita	sdl N96-07a	1/ 35
2001	Port Wine	sdl N96-07a	?/100
2004	White Arc	sdl N96-07a	3/ 50
2001	Sarcee	sdl N96-07a	?/100
2001	Whitewood	sdl N96-07a	?/ 20
2003	sdl NM134846	sdl N96-07a	3/ 90
2003	Claude Shride	sdl N96-07a	3/100
2005	Random Bliss	sdl N96-08a	3/ 14
2005	White Arc	sdl N96-08a	no dice!
2005	Sarcee	sdl N96-08a	3/ 30
2005	Amelita	sdl N96-08a	no dice
2005	Port Wine	sdl N97-01	4/250+
2002	White Arc	sdl N97-02	?/ 12
2004	sdl HH Ylw1	sdl N97-02	no dice!
2004	Amelita	sdl N97-02	3/ 90
2004	Sarcee	sdl N97-02	3/200
2004	sdl Slate1	sdl N97-02	3/ 30
2005	Akimina	sdl N97-02	3/ 25?
2004	sdl Slate3	sdl N97-02	3/ 25 ?
2005	sdl CrmGrn	sdl N97-02	4/150
2005	sdl CrmYlw	sdl N97-02	3/120
2004	White Arc	sdl N97-02	3/ 50
2004	Sarcee	sdl NM134846	4/200
2002	Sarcee	sdl NM134846	3/ 70
2003	Claude Shride	sdl NM134846	3/ 80
2004	Komet F	sdl NM134846	3/ 0
2004	Orchid Gem	sdl NM134846	3/ 30
2004	sdl HH Ylw1	sdl NM134846	no dice!
2004	sdl Slate3	sdl NM134846	3/ 25
2002	Amelita	sdl NM134846	?/ 40
2004	Amelita	sdl NM134846	3/110
2004	sdl HH Ylw1	sdl NM134849	no dice!
2004	sdl ERM 44	sdl PnkRnb	3 / 0
2004	Sarcee	sdl PnkRnb	3/150

2004	sdl ERM 12	sdl Raspb.Shk.	3/ 85
2005	Sarcee	sdl RaspbShk	3/ 50
2004	Hilde Haber	sdl Slate3	no dice!
2001	Larissa	sdl Slate3	?/ 0
2004	Charlene	sdl Slate3	no dice!
2004	sdl N96-07a	sdl Slate3	4/125
2004	sdl NM-123846	sdl Slate3	3/ 30
2004	sdl N97H96-07a	sdl Slate3	3/150
2001	Sarcee	sdl Slate3	?/100
2004	White Arc	sdl Slate3	3/ 20
2004	Sarcee	sdl Slate3	no dice!
2004	Port Wine	sdl Slate3	2/ 60
2004	sdl NM-123846	sdl Slate3	3/ 30
2000	Mrs R O Backhouse	sdl Tarlton album	?/ 85
2005	White Arc	sdl(OzxPW)	3/ 35?
1998	Terrace City	Sing Out	2/ 5
1998	Sparkler	Sing Out	?/ 0
1998	G.F.Wilson	Sing Out	2/ 8?
1998	Sutton Court	Sing Out	3/ 9?
1998	Arabian Knight	Sing Out	2/ 2
1998	Mahogany Bells	Sing Out	2/ 2
1999	Mrs R O Backhouse	Slate's Select	3/ 0
1999	Bornholm	Slate's Select	2/ 0
1998	Mrs R O Backhouse	Slate's Select	3/ 15?
1999	Zlatice	Slate's Select	3/ 20
1999	L.m.albifl.pnk	Slate's Select	?/ 90
1998	L.m.album	Slate's Select	3/ 6
1998	Claude Shrude	Slate's Select	3/ 0
1999	Port Wine	Slate's Select	3/120
1999	Akimina	Slate's Select	2/ 0
1999	Pink Attraction	Slate's Select	2/ 8?
2000	Larissa	Slate's Select	?/ 0
1999	Irish Cream	Slate's Select	2/ 0
1999	Larissa	Slate's Select	2/ 0
1999	L.m.var.daugava	Slate's Select	2/110
1999	L.m.album	Slate's Select '98	?/ 0
2000	L.m.albifl.pnk	Slate's Select '99	?/ 0
1997	Theodor Haber	Sparkler	?/ 0
1998	Sing Out	Sprenkelinchen	?/ 0
2000	Akimina	Sprenkelinchen	?/100?
1998	Claude Shrude	Sprenkelinchen	3/ 4?
2000	Slate's Select	Sprenkelinchen	?/ 70
2000	Claude Shrude	Sprenkelinchen	?/ 10?
1998	Amelita	Sprenkelinchen	2/ 22
2000	JS Dijt	Sprenkelinchen	?/ 0
2000	Moonyeen	Sprenkelinchen	?/ 8?
2000	Mahogany Bells	Sprenkelinchen	?/ 4?
2000	Brocade	Sprenkelinchen	?/ 0
1998	Bendick	Sprenkelinchen	2/ 6?

2000	Mrs R O Backhouse	Sprenkelinchen	?/ 55
1998	Pink Taurade	Sprenkelinchen	2/ 0
2000	Pink Taurade	Sprenkelinchen	?/ 0
2000	Claude Shrider	Sutton Court	?/ 50
2000	Terrace City	Sutton Court	?/ 50
2000	Tsingense	Sutton Court	?/ 20?
2000	L.m.album	SuttonCourt	?/ 30
2000	Larissa	SuttonCourt	?/ 0
1999	Claude Shrider	Terrace City	?/ 6
1997	Sarcee	Towering Delight	?/ 30
2000	Sutton Court	Tsingense	?/ 35?
2000	Slate's Select	Tsingense	?/35
2004	sdl NM-123846	Tsingense	3/ 10 iffy
2004	Amelita	U-forgot-to-tag	3/ 85
1999	Sparkler	White Arc	2/ 35
2000	Brocade	White Arc	?/ 70?
1999	L.m.albifl.pnk	White Arc	2/150
1999	Autumn Color	White Arc	?/ 65
1999	Bendick	White Arc	2/ 12
2002	Maroon King	White Arc	3/ 35
2000	Tsingense	White Arc	?/ 9?
2000	Sprenkelinchen	White Arc	?/100
1999	Arabian Knight	White Arc	2/ 15
1999	Sarcee	White Arc	3/160
1999	Pink Taurade	White Arc	3/ 0
1999	Tsingense	White Arc	3/ 20
2001	Charlene	White Arc	?/ 8?
1999	Pink Attraction	White Arc	?/ 0
1999	Windsong Hybrids	White Arc	2/ 10?
1999	Theodor Haber	White Arc	2/ 0
2000	Arabian Knight	White Arc	?/ 40
2004	Arabian Knight	White Arc	3/ 25
2000	Mahogany Bells	White Arc	?/ 6?
1999	Slate's Select	White Arc	2/ 30
1999	Akimina	White Arc	2/ 0
1999	Claude Shrider	White Arc	2/ 15
2000	Claude Shrider	White Arc	?/ 40?
1999	Larissa	White Arc	2/ 0
1999	Sutton Court	White Arc	?/ 20?
2000	Sutton Court	White Arc	?/ 0
2004	Sarcee	White Arc	4/120
2001	Irish Cream	White Arc	?/ 25
1999	Brocade	White Arc	3/ 28
1999	Mahogany Bells	White Arc	3/ 20?
2001	Maroon King	White Arc	?/100
1999	Amelita	White Arc	3/ 0
2000	JS Dijt	White Arc	?/ 0
2002	Amelita	White Arc	?/ 50
2001	L.m.var.daugava	White Arc	?/ 20

2001	Mahogany Bells	White Arc	?/ 10
2000	Sparkler	White Arc	?/ 50
2001	Port Wine	White Arc '00	?/100
2001	L.m.album	White Arc '00	?/125
2001	Sarcee	Whitewood	?/110
2001	Amelita	Whitewood	?/ 50
2004	Cranberry Dancer	Whitewood '01	3/ 0
2004	L. martagon (tree)	Whitewood '01	3/ 20
2004	Chernova	Whitewood '01	3/ 25
2004	sdl ERM 35	Whitewood '01	2/ 4 ?
1998	Warm Traces	Zitronenglockchen	2/ 40
1999	Pink Attraction	Zlatice	?/ 0
1999	Port Wine	Zlatice	2/ 30