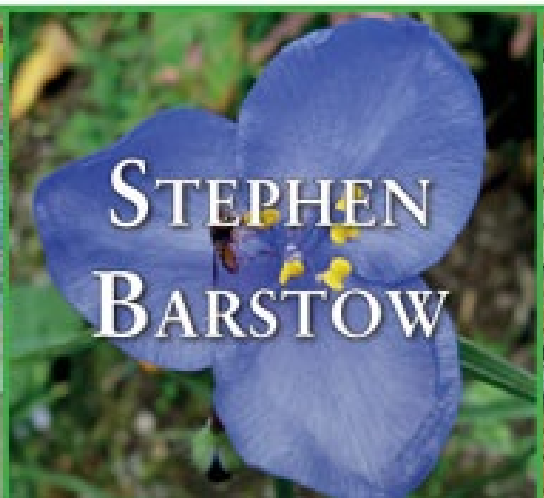
Around the World in 80 Plants



Stephen Barstow

AROUND THE WORLD IN 80 PLANTS

AROUND THE WORLD IN 80 PLANTS

An Edible Perennial
Vegetable Adventure
in Temperate Climates

STEPHEN BARSTOW

Permanent Publications

Published by
Permanent Publications
Hyden House Ltd
The Sustainability Centre
East Meon
Hampshire GU32 1HR
United Kingdom
Tel: 0844 846 846 4824 (local rate UK only)
or +44 (0)1730 823 311
Fax: 01730 823 322
Email: enquiries@permaculture.co.uk
Web: www.permanentpublications.co.uk

Distributed in the USA by
Chelsea Green Publishing Company, PO Box 428, White River Junction, VT 05001
www.chelseagreen.com

Stephen Barstow's website: www.edimentals.com

Designed by Two Plus George Limited, wwwTwoPlusGeorge.co.uk

Index by Amit Prasad, 009amit@gmail.com

eBook conversion - eBookPartnership: www.ebookpartnership.com

British Library Cataloguing-in-Publication Data
A catalogue record for this book is available from the British Library

PRINT ISBN 9781856231411

PDF ISBN 9781856231428

EPUB ISBN 9781856231435

MOBI ISBN 9781856231442

CONTENTS

The author's world record salad with 537 varieties

ABOUT THE AUTHOR

STEPHEN BARSTOW grew up in the south of England, and spent seven years in the Universities of Exeter, East Anglia in Norwich and Heriot-Watt in Edinburgh, where he was awarded a PhD in 1981 specialising in ocean waves. While a student in Edinburgh, he became interested in organic vegetable growing. A big early inspiration was founder and organic pioneer Lawrence Hills whom he met at HDRA (Henry Doubleday Research Association) in the early 1980s. In 1981, Stephen moved to Trondheim in Norway to work. Both he and his wife were vegetarians, which was virtually unheard of in Norway at that time, and there were only a handful of vegetables available in supermarkets. Growing their own vegetables was therefore a necessity and most of the vegetables Stephen grew in Scotland turned out also to be possible in their new home. He also quickly discovered the Norwegian Useful Plants Society (the over 100-year-old Nyttevekstforeningen, see box, page 210).

Another inspiration in the mid-1980s was Roger Phillips' book *Wild Food*. Contacting Phillips, Stephen was loaned a set of slides from the book which he used in talks on wild edibles in Norway. At the end of the 1980s, he began to collect some of the local wild edibles and planted them in a bed in his garden. About the same time, he obtained a copy of *Sturtevant's Edible Plants of the World* through the Abundant Seed Foundation in the USA. It has notes on some 3,000 different edible species worldwide (N.B. Some are no longer recommended as edible, so don't use this work blindly!). To his surprise, many of the species were perennial plants commonly cultivated in Norwegian gardens.

With assistance from various seed exchange clubs, Stephen's collection of edible plants grew rapidly. Inspired first by Sturtevant and later by Ken Fern and Plants For A Future, Stephen has sown several hundred new species every year in addition to traditional vegetables and the collection peaked at some 3,000 varieties.

Stephen's garden is located on a rocky hillside near the village of Malvik, 15km east of the Norwegian city, Trondheim, and with a beautiful view over Norway's largest fjord, the Trondheimsfjord. Dubbed 'The Edible Garden' when it was presented in a Norwegian television gardening series in 2003, this abundance made it relatively easy for Stephen to set the world record for the greatest number of plant varieties in a salad. This world record attempt took place on 19th August 2001. The final salad had a grand total of 363 distinct plant varieties. However, this was well and truly beaten at the follow-up event on 24th August 2003 when a salad with 537 varieties was put together (see photo opposite).

Stephen has written a number of articles both in the journal of the Norwegian Useful Plants Society, the largest Norwegian gardening magazine, *Hagetidend*, and *Permaculture* magazine. Since 2006, he has been national coordinator of the

Norwegian Seed Savers (protecting heritage Norwegian vegetables, including some perennials) and won the 2012 Norwegian Plant Heritage Award.

Over the last few years, Stephen has had a part-time job working for the Norwegian Genetic Resource Centre on collecting old perennial vegetables and herbs from all over Norway, including various Alliums, asparagus, Good King Henry and others.

A Note on the Climate

Stephen's garden is close to 64°N, in an area of extreme climatic variability. The grass can be green on 1st January and snow might lie for a short while on 1st June. Locals talk about having two seasons – the green and the white winter. However, it is surprisingly mild for the latitude, not far from the Arctic Circle, due to the effect of the North Atlantic drift (continuation of the Gulf Stream). The fjord never freezes in winter and this helps provide a local climate where minimum winter temperatures are seldom much below -20°C. In fact, even though there is much snow in the hills around, there are long snow-free periods in the garden. This is not necessarily a good thing as a stable snow cover acts as a good insulator for less hardy perennials. The mean monthly temperature ranges from about -3°C in January to 15°C in July, so the summers are cool.

CONTACT THE AUTHOR

I would very much appreciate your feedback, comments, seed, plants etc., so please don't hesitate to contact me at:

Email: sbarstow2@gmail.com

Facebook: Stephen Barstow, www.facebook.com/stephen.barstow.7

Facebook groups: Edimentals, Plant Breeding for Permaculture, Friends of *Hablitzia tamnoides* and Friends of Ground Elder

Website/blog: www.edimentals.com

DEDICATION

To my friend Sébastien Verdière and your amazing edible garden at
Château de Valmer: so sad you never made it to Norway,
nor held this book in your hands, bon voyage my friend.

To my dear Mum and Dad

To Alva Barstow, so glad you liked the *ALlium VAlidum* I gave you,
you are my little hope for the future…

DISCLAIMER

We have not included detailed identifications of the type you would find in a field guide as this is mainly a book to inspire perennial vegetable gardening rather than foraging. In any case, many of the plants are found over a wide geographical area and confusion species would vary between region, so this would have been an impossible task to get right. Many of the plants are what I like to call Edimentals (edible ornamentals). If you are purchasing plants, it is preferable to source these from nurseries specialising in edibles as there will be more focus on getting the identification right than for an ornamental nursery. Nevertheless, we take no responsibility for readers misidentifying plants. It is also always advisable to try just a small amount of new plants the first time, as you may be allergic to the plant in question.

ACKNOWLEDGEMENTS

When I look back over the years, there are many people who have helped me along the way. Wandering around my edible garden, many of the plants remind me of people in one way or another. It may have been best not to try to name people here as I am bound to have forgotten people, so very sorry if you're in that category. There follows a short list…

Thanks are due to Robin Allen (a big gardening inspiration in the early days), Telsing Andrews (sister-in-arms, thanks for the interview), Magnar Aspaker (for the Norrland onion), Per Arvid Åsen (Scandinavian monastery plants), Sergey Banketov (for the wild Caucasian Hablitzia and much more), Paul Barney (of Edulis nursery, intrepid edibles explorer), Trevor Barstow (for hating Brussels Sprouts), Jonathan Bates (who discovered Hablitzia in a parallel universe), Alexandra Berkutenko (for giving access to plant material from the Magadan and the Russian Far East, in particular *Aster scaber*), Joost Bogemans (shame about your DisASTER whilst commercialising halophytes), Mats and Marie-Louise Borrefors (my friends at Frostviken Keramikk, for the salad bowls), Emma Cooper (fully fledged ethnobotanist with a wonderful blog), Martin Crawford (forest garden and unusual edible inspiration, Agroforestry Research Trust and newsletter), Lieven David (Belgian Oerprei and much more), Mark McDonough (The Onion Man), Kjell Dragland (the first Norwegian Hablitzia nursery), Stephen Facciola (I wore out your *Cornucopia II*), Ken Fern (hero of Plants For A Future, I wore out your database), Geir Flatabø (his knowledge of the plant world and edimental garden in Ulvik, Norway), Ove Fosså (Vossakvann and Slow Food Norway), Alys Fowler (thanks for coming to Norway and for the great write-up in *The Thrifty Forager*), Reinhard Fritsch (Allium expert at Gatersleben), Marie Gaden (so many of my plants came from Marie), Paolo Gaiardelli (Italian-Icelandic perennial vegetable breeding), Melana Hiatt (you helped so much with sourcing American species in the days of the Wild Forager and Edible Wild email groups), Lawrence Hills (HDRA hero), Stewart Hinsley (all things Malva), Søren Holt (part of the *Allium victorialis* and other stories), Chris Homanics (a man to watch), Molly Hougaard (peas and Hablitzia in Denmark), Lena Israelsson (who perhaps subconsciously sowed the seed that became this book, through her own book, *Jordens Täppor*, introduced me to a number of exciting edibles like Hablitzia and *Allium nutans*), Graham Jenkins-Belohorska (perennial kale breeder), Alvilde Johansen (generous local gardener), Ossi Kakko (who introduced me to Good King Henry as a grain plant), Frank van Keirsbilck (and his wonderful edible garden, Andes in Flanders!), Kirsty McKinnon (coordinated the Norwegian organic garden network for many years), Jan Knuiman (*Aster tripolium* and much more), Leena Lindén (for all your work on Hablitzia in Finland), Judith van Koesveld (Victory Onion pesto from the Lofoten Islands), Jan Erik Kofoed (hero foraging teacher in my area, I learnt so much from you), Helmut Lieth (halophytes), Leda Meredith (an old-timer from

Melana's table and queen of New York foraging), Kat Morgenstern (of Sacred Earth fame for all the wonderful advice, knowledge and encouragement), Brynhild Mørkved (Tromsø ethnobotanist who discovered *Allium victorialis* and Hablitzia in Norway), Aiah Noack (Edimentals collaborator), Anemette Olesen (her books inspired my interest in unusual edibles), Arne Odland (sowed a seed in me after I gave my first Round the World talk to the local group of the Norwegian Botanical Society in Trondheim in 2006, encouraging me to convert the talk into a book; it took a long time!), Inger-Lise Østmoe (Fru Matsprell), Li An Phoa (searched for and found Hablitzia in the Caucasus, Spring College), Juerg Plodeck (Species Hemerocallis-man), Saideh Salamati (eats Tromsø Palm!), Misoni Sandvik (foraging stories from her childhood in Korea), Lorna Smith (and the Hoary Mullein in Norwich which started all this), Owen Smith (too far ahead of his time with unusual edible plant company Future Foods from 1989 and all things rhizospheric), Ronny Staquet (Belgian/French Edimentals/Decomestibles), Eileen Stoupe (for sharing), Samuel Thayer (my favourite foraging author), Lila Towle (hero of Danish Seed Savers), Åke Truedsson (Sweden's Allium guru), Justin West (searched for and found Hablitzia in the Caucasus) as did Tycho and Karoline Rosehip as we go to press in September 2014, Ovin Udø (for the 100 year old 'Catawissa' onion from Udøy), and to Robin and Hazel Barstow for posing for the embarrassing pictures. Finally, thanks to whoever has been arranging all the cosmic resonating that's been going on over the last few years above and far beyond mere chance, in particular a memorable day with lactoRita, TeraMeg from Woodstock, VT and Vrrrooonica, together with miracle man Tom Harald Eckell at the Århus andelsgård (CSA) near Skien.

Thanks also to Åsmund Asdal and the Norwegian Genetic Resource Centre, and Svein Solberg and Nordgen for financial support helping with researching the Scandinavian perennial vegetables.

> *Put a seed into the ground*
> *Wait for the sun to come around*
> *Nurture it with love and care*
> *Give it sun and rain and air*
>
> Micky Jones et al., 1972

FOREWORD

by Alys Fowler

I have been patiently waiting for this book and then impatiently pestering for it, drumming my fingers loudly. And then one day it appears. Like everything that you have to wait for in life, it's better for it.

This book speaks of its maker … It's a wonderfully detailed, often eccentric look at all the plants you've ever wondered were truly edible. Stephen is an extraordinarily clever man with a truly academic approach to knowledge, thus every detail you could wish for is in here. I've been poring over my copy and have made a list of must-try plants, planning how I can rearrange my garden this winter so I can fit in more of these.

There are several reasons why Stephen's work is so important. Firstly, the climate in which Stephen grows is not easy. True, he has a fjord to keep the worst of the freezing temperatures away, but he has a very short growing season. His garden is also on bedrock often just inches below the soil surface. He's a committed permaculturist so you won't find electric strimmers or extra heat for the greenhouse – all his rainwater is recycled and I have a fantastic picture of a year's worth of Norwegian newspapers suppressing weeds.

All of which amounts to this: if he can grow it, so can you.

This tome is a treasure trove of truly useful perennial plants for making healthy, ecologically balanced, edible gardens. Our climate is increasingly unpredictable and many traditionally grown crops are not faring well in such conditions. We need

diversity in our crops, we need people like Stephen who explore the boundaries of what's edible and worthwhile to grow, and we need people like you to get inspired and start growing them too. Anyone who reads this book and acts on it is an early adopter of a brave new growing world. Get sowing, write about it, write to Stephen, join social media groups and tell the world that we have found new things to eat and the future tastes fine!

ALYS FOWLER
Garden author and broadcaster

THE PURPOSE OF THIS BOOK

With this book I want to share with you my experiences of some 30 years of trialling a large selection of largely perennial vegetables here in Malvik, Norway. Rather than giving short descriptions of many of the thousands of species and varieties that I've tried, I've settled on giving a more detailed description of around 80 of my favourites, most of which I will use in a normal year and most of which have thrived in my relatively cold climate. The seed of this book was a talk I gave to the local groups of the Norwegian Botanical Society and the Norwegian Useful Plants Society back in 2006-2007. The talk, and now this book, takes the reader on a gastro-botanical journey around the world in search of perennial vegetables and the stories they tell. The journey will take us underground gardening in Tokyo, beach gardening in the UK, and roof gardening in the Norwegian mountains, and will involve stories of the wild foraging traditions of the Sámi people of northern Norway, the rich indigenous food traditions of the Mediterranean peoples, the high altitude ethnobotany of the Rolwaling Sherpas in the Himalayas, wild gathered Sansai and Sannamul or mountain vegetables in Japan and Korea respectively, and a wild aquatic plant that sustained Native American tribes with a myriad of food and other products.

The book is divided into six chapters or legs of this journey, starting fittingly on the streets of London, through western and central Europe, the Mediterranean countries, West Asia, the Caucasus, the Himalayas, Siberia, East Asia, a short stop in Australasia, South America, North America and finally via Greenland to Scandinavia. A number of cosmopolitan species could have been included in any of the chapters and I have in such cases chosen the place or country I most associate with the species or the country with the most interesting story about the plant in question. Thus, for example, the common dandelion becomes French as it is mainly in that country that it is cultivated commercially and sold on markets.

I have also chosen to restrict this book to plants which provide leafy greens, excluding root crops although secondary uses are also mentioned. These are mainly herbaceous plants (i.e. they die right back to the ground in winter) but include a couple of herbaceous climbers and one small deciduous tree. Most of the plants presented will tolerate some shade and about 10% are real woodlanders accepting quite deep shade. Thus, I introduce at the same time a selection of the best perennials suitable in a forest garden system (the table on page 265 gives a look-up summary).

Almost all of the plants in this book have been wild gathered by native peoples even up to recent times. With a few exceptions, such as globe artichoke/cardoon and asparagus, the plants themselves are little improved compared to the wild species. I was therefore surprised to discover that several of these wild plants actually give higher yield than any of my traditional vegetables! I was originally inspired on this quest for perennial vegetables of the world by local foraging traditions where I live, or

perhaps lack of traditions, for it is rather ironic that Norway should have a Useful Plant Society (page 210) when traditions here are not particularly rich. I was oblivious to the fact at the beginning that when I started moving some of the best local wild edibles into my garden for convenience, I was doing the same as native people had done for millennia, the first stage of domestication! In fact many of the plants in this book have been cultivated on a small scale in home gardens.

I should thank Alys Fowler, who pointed out during a memorable visit here whilst researching her book *The Thrifty Forager* that when I collected food for dinner in my garden it really wasn't that far removed from foraging. With a large collection of wild gathered plants from throughout the temperate world I could be a Japanese forager one night, a forager in an Italian mountain village the next and maybe my next move should be to invite Japanese, Native American, Nepalese and Italian foragers to an international forage at my place! Now that would be interesting…

In reality, there are a whole range of interactions between people and edible plants from wild gathered to advanced garden cultivars far removed from the wild species. Native peoples would, for example, often manage plants in their wild environment to maintain the plants and increase their yield. This might involve in situ weeding, modifying the habitat through removing trees and shrubs, protecting plants against grazing, and even active planting. This practice is sometimes known as incipient horticulture and target species were most often perennials and plants could be kept living and producing for generations. I realise now that I have been doing all of these things in the semi-wild part of my garden.

Other wild plants were already found in garden environments on disturbed soil; these are what we normally call weeds! But most weeds are edible as they don't need to produce an arsenal of chemicals to protect themselves against grazing animals and some are also perennial. I had for a long time harvested or foraged weeds from my traditional vegetable beds, plants such as common chickweed, *Stellaria media*, which would grow quickly in spring and smother my potato beds and be ready to pick before the potatoes had really started growing. I also let common sow-thistle, *Sonchus oleraceus*, seed itself on the edge of my vegetable beds where they don't really compete, inspired by the Maori of New Zealand who do the same in their vegetable gardens (see page 164). Harvesting weeds then increases total yield on a piece of land, no wonder that it has been practised in many cultures around the globe. In the southwest US and Central America edible weeds are valuable and are known as Quelites. In Japan, we will later see that perennial Hosta is tolerated by rice farmers as a weed as it has its own value on the market (see page 144). Rivera et al. (2006) use the generic term Cryptocrop for these encouraged or useful weeds.

This book does not discuss the medicinal properties of the plants covered, only in the important preventative medicinal sense. I am convinced from my extensive reading researching this book that the healthiest diet is one rich in a diverse mix of leafy greens incorporating wild and semi-domesticated plants as this provides both more nutritious food and a wider range of protective phytochemicals such as antioxidants.

Modern vegetable cultivars have after all largely been selected for other characteristics than nutrition and antioxidant activity, such as yield, transportability and (sweeter, less bitter) flavour.

The authorities here have a campaign to increase vegetables and fruit in the diet *Fem om dagen* or 5-a-day. The Barstow diet/lifestyle recommends 80-a-day (this always gets a laugh at my talks). In addition, if at all possible, do whatever you do manually (digging, biking, walking, mowing…) and you will be set up for a long healthy life. Well, I must be honest that I don't really often manage 80 varieties, the norm in summer is about 20, less in winter! Just aim for as many as possible… This diet has largely been inspired by Mediterranean wild gathered food traditions related in more detail in Chapter 2. It was in Crete, where people could often in the past recognise maybe 100 wild edibles, that the protective nature of a species rich vegetable based diet was first recognised and numerous studies over the last 15 years or so have thoroughly documented similar traditions throughout the Mediterranean, notably in Italy. These multi-species dishes originally inspired my species-rich mixed salads (see page v). It also turns out, at first sight somewhat surprisingly, that there are many common species in these Mediterranean dishes also found growing wild in northern Europe. This is due to the fact that many of the species used are cosmopolitan weeds, having adapted over time to different climates. Therefore, it is possible to reconstruct these Mediterranean-style dishes elsewhere. For example, on page 62, I describe a 56-species Sicilian *calzone* that I made at home. Delicious, fun and highly nutritious. One bite of one of these *calzones* and you will eat a wider range of vegetables than most people nowadays will consume in a lifetime. However, I don't think it is that important to use the same species as used in the Mediterranean, just use what you have at hand.

Although I could have incorporated information with available data on nutrient and antioxidant content of the species included in this book, the data is often not really comparable as levels may vary with harvesting time, weather, growing conditions etc. perhaps giving the wrong conclusions, and there is little data on many of the species included. If you eat quantities of leafy greens from a wide mix of species, you will not need to worry about this.

My choice of species to include in this book has of course largely been determined by what grows well for me here in Norway. If you have a very different climate to me you may well find that some of my favourites do not grow well where you are. If you nevertheless would like to increase your chances of succeeding, then try to source seed/plants from different sources, as there is often a large genetic variation within a given species across its wild range. For example, when I introduced the Caucasian spinach, *Hablitzia tamnoides* (Chapter 4), the seed I provided was from plants which had adapted to Scandinavian conditions with cold winters and mild summers over 100 years. Initial trials of the plant in warmer climates met with limited success, but seed from a wild sourced plant seem to grow better in warmer climes. So please also share your experiences!

As this is primarily a gardening rather than a foraging book, it does not contain

detailed descriptions allowing you to identify the plant in question in a wild setting as would be essential for a foraging guide. This would have been a major undertaking as some plants have a very wide geographic range and different confusion species might be present in different areas. It is important to realise that it is not unusual to end up with the wrong plant when starting from seed, particularly if you trade over the internet or obtain seed from seed exchanges as I have largely done, but this also sometimes happens when sourcing from commercial sources. In particular, Allium (onion) species are very often wrong, and even plants in botanical gardens are actually more often wrong than correct! It is probably best to try to source seed and plants from nurseries and organisations specialising in edible plants. Many of the plants in this book are mainly available as ornamentals at present and general nurseries will not be so concerned with selling you the wrong thing as an edible plant nursery would.

I have introduced the term Edimentals (short for edible ornamentals) because these I believe are particularly valuable in a garden as they double as food and ornament. Visiting botanical gardens and other gardens, I've often enjoyed spotting the edimentals in the ornamental borders. There are more than you would perhaps expect. This is not so surprising however, when you realise that an estimated 30% of all wild species have actually been used for food.

This is also not a cookbook, but I have included a number of local traditional recipes and I also describe typical ways of preparing these plants for the table. I personally rarely use recipes anymore and I just improvise, jazz cooking if you like. It's much more fun and dinner's never boring!

In each of the species accounts which follow, I give basic botanical details about each plant including its size, habit, habitat and where it is found in the wild. Other closely related species are discussed plus details of how the plant has been used across its wild range are also given, as is my own personal experience. Finally, details of how to propagate and cultivate the plant in question are given and its availability in the trade is also discussed.

I sincerely hope that this account inspires you to try some of my recommendations and perhaps also some of your own. It's been a lot of fun.

About Perennial or Permavegetables

Apart from complementing traditional vegetables, there are many merits to perennial vegetables as follows:

Advantages

- Low maintenance, more or less looking after themselves, requiring little more than a compost mulch once in a while.
- You don't have to sow and plant every year.

- They lock up more CO_2.
- Many can be grown on marginal land and odd spots in the garden where you wouldn't dream of growing traditional vegetables.
- Many thrive in shady conditions.
- Pests are absent or much less of a problem than in traditional vegetables during the harvest season (spring).
- Watering is also not normally required as soil moisture is often high in the spring when growth is at its maximum; lower energy intensive.
- Nutrient and antioxidant levels are likely to be higher than in traditional vegetables.
- Yields in some species are surprisingly high when you consider these are unimproved wild selections; there is therefore a lot of potential for breeding improved selections.
- Many can double as ornamentals in summer.
- Air drying for preservation is much easier at this time of year as harvest is followed by the driest, warmest weather of the year; preservation by lactofermentation is also easier in warmer weather.
- One can also often harvest repeatedly (cut-and-come-again), although more research is needed to develop optimal cultivation/intercropping strategies (if there is such a thing in polyculture!).
- Perennials are much more robust against the increasing vagaries of the changing climate and bind more CO_2 than traditional vegetables.
- Roots can be forced in winter for fresh out-of-season greens.
- Perennials are probably more productive in marginal areas as they start assimilating solar energy from early spring.
- Some perennial traditional wild crop relatives may have disease resistance (e.g. perennial cabbages may be more resistant to clubroot).
- If you have limited space, it makes more sense growing perennials as vegetables tend to be more expensive in spring.

There are of course also some disadvantages

- The land is permanently occupied and only one harvest a year is usually possible.
- Perennials are mostly productive in the springtime.
- Perennial weeds may reduce yields, but with knowledge weeds can also be a resource.
- Perennials don't last forever and some will need replanting every few years to maintain yields.
- Viruses can be a problem (as is the case with potatoes, garlic, shallots and rhubarb).